

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
<small>Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.</small>				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE 5 June 1998	3. REPORT TYPE AND DATES COVERED Master's Thesis 3 August 1997 - 5 June 1998	
4. TITLE AND SUBTITLE A Study of Combined Arms Warfare by Alexander the Great			5. FUNDING NUMBERS	
6. AUTHOR(S) Major Robert B. Pederson, U.S. Army				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) US Army Command and General Staff College 1 Reynolds Avenue Fort Leavenworth, KS 66027-1352			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited			12b. DISTRIBUTION CODE A	
13. ABSTRACT (Maximum 200 words) <p>This study reviews the battles and campaigns of Alexander the Great for his use of combined arms tactics. The study reviews the ancient world from the perspective of the Macedonia Empire along with the major personalities of its allies and rivals. After a short review of the early history of the territory and Macedonia's rise to regional power, the study chronologically reviews Alexander's campaign of consolidation, his campaign in Asia Minor, the eastern campaign against Persia, the Asiatic campaign, the Indian campaign, and the wars of the Diadochi.</p> <p>The study concludes by showing that the tactics of combined arms were utilized by Alexander the Great. It also demonstrates that Alexander successfully applied military doctrine and made significant development towards the evolution of warfare. His performance of executing tactical river crossings; conducting anti-guerrilla warfare; demonstrating the flexibility to operate in mountains, deserts, or cities; the ability to organize, train, re-arm, and maintain discipline within a large army; introducing the use of deception, skirmisher, mounted-infantry, and field artillery, to name a few, are presented as Alexander's key instruments to victory. Finally, these instruments to success are directly related to modern military operations.</p> <div style="text-align: center; font-size: 2em; font-weight: bold; margin-top: 20px;">19980731 085</div>				
14. SUBJECT TERMS Alexander the Great, Combined Arms Operations, Combined Arms Warfare			15. NUMBER OF PAGES 113	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UNLIMITED	

A STUDY OF COMBINED ARMS WARFARE BY ALEXANDER THE GREAT

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE

by

ROBERT B. PEDERSON, MAJ, USA
B.S., University of Wisconsin-Stout, Menomonie, Wisconsin, 1984
M.S., University of Florida, Gainesville, Florida, 1995

Fort Leavenworth, Kansas
1998

Approved for public release; distribution is unlimited.

DTIC QUALITY INSPECTED 1

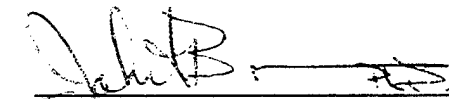
MASTER OF MILITARY ART AND SCIENCE

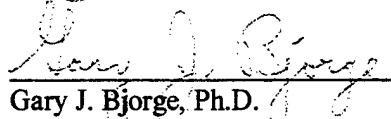
THESIS APPROVAL PAGE

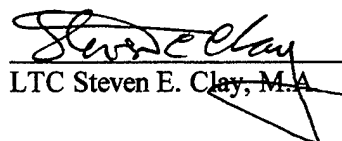
Name of Candidate: MAJ Robert B. Pederson

Thesis Title: A Study of Combined Arms Warfare by Alexander the Great

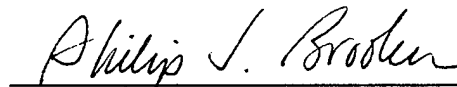
Approved by:

 _____, Thesis Committee Chairman
SFC John T. Broom, Ph.D.

 _____, Member
Gary J. Bjorge, Ph.D.

 _____, Member
LTC Steven E. Clay, M.A.

Accepted this 5th day of June 1998 by:

 _____, Director, Graduate Degree Programs
Philip J. Brookes, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

A STUDY OF COMBINED ARMS WARFARE BY ALEXANDER THE GREAT, by MAJ Bob Pederson, USA, 114 pages.

This study reviews the battles and campaigns of Alexander the Great for his use of combined arms tactics. The study reviews the ancient world from the perspective of the Macedonia Empire along with the major personalities of its allies and rivals. After a short review of the early history of the territory and Macedonia's rise to regional power, the study chronologically reviews Alexander's campaign of consolidation, his campaign in Asia Minor, the eastern campaign against Persia, the Asiatic campaign, the Indian campaign, and the wars of the Diadochi.

This study concludes by showing that the tactics of combined arms were utilized by Alexander the Great. It also demonstrates that Alexander successfully applied military doctrine and made significant development towards the evolution of warfare. His performance of executing tactical river crossings; conducting anti-guerrilla warfare; demonstrating the flexibility to operate in mountains, deserts, or cities; the ability to organize, train, re-arm, and maintain discipline within a large army; introducing the use of deception, skirmishers, mounted-infantry, and field artillery, to name a few, are presented as Alexander's key instruments to victory. Finally, these instruments to success are directly related to modern military operations.

ACKNOWLEDGMENTS

This research has involved the cooperation and assistance of a large number of people and organizations. My thanks go out to each participant; whether listed herein or not, each was integral in the end product contained hereinafter.

My committee has been an excellent balance of support and meaningful advice. Committee chairman Dr. Broom has provided challenge, direction, and encouragement on a regular basis throughout this research. His input was paramount to the beginning of the general direction for this research. Dr. Bjorge and LTC Clay have provided technical advice and copy editing for much of this thesis.

Special acknowledgment is due LTC David Chuber for his tremendous assistance and counsel as one of my instructors and mentors during the academic year. My thanks also are extended to the staff of the Combat Studies Institute for the many intellectual debates that I participated in and to the Graduate Degree Program Office who largely edited the thesis.

Most importantly, I cannot express enough thanks to my wife Shelbe for her continued support, tolerance, and sacrifice. Without the quiet study time she made available this thesis would not have been possible. Lastly, I dedicate this project to my children, Mitch and Nicole, in the hopes that they will appreciate the study of history as much as I have.

TABLE OF CONTENTS

	Page
APPROVAL PAGE	ii
ABSTRACT	iii
ACKNOWLEDGMENTS	iv
LIST OF ILLUSTRATIONS	vi
INTRODUCTION	vii
GLOSSARY	xvi
CHAPTER	
1. THE REIGN OF PHILIP II	1
2. THE CAMPAIGN OF CONSOLIDATION	19
3. THE CAMPAIGN IN ASIA MINOR	33
4. THE CAMPAIGN IN EASTERN PERSIA	46
5. THE ASIATIC CAMPAIGN	60
6. THE INDIAN CAMPAIGN	73
7. WARS OF THE DIADOCHI	89
8. CONCLUSIONS AND RECOMMENDATIONS	98
BIBLIOGRAPHY	111
INITIAL DISTRIBUTION LIST	114

LIST OF ILLUSTRATIONS

FIGURE	Page
1. Map of Ancient Greece and Macedonia	4
2. Battle of Chaeronea	18
3. Map of Thebes	31
4. Battle of Granicus	36
5. Map of Asia Minor	39
6. Battle of Issus	44
7. Battle of Tyre	48
8. Map of Mediterranean Seaboard	51
9. Battle of Gaugamela	57
10. Alexander's Route to Jaxartes River	65
11. Battle of Seven Cities	68
12. Alexander's Route to Indus River	76
13. Plan of Operations Against Porus	78
14. Battle of Hydaspes	81
15. Alexander's Route to Carmania	87
16. Map of Successors territories	92
17. Route of Alexander's March	106

INTRODUCTION

Alexander the Great's genius in warfare has been often acclaimed, and in the eyes of many military historians he was the finest general the world has ever known. During his momentous 13 year reign (336-323 B.C.), which was characterized by virtually continuous warfare, Alexander marched with an army over 20,000 miles, covering portions of three continents, subduing much of the civilized world of his day and completing his great adventure before he turned 33. His campaigns included every type of warfare: sieges, mountain and desert fighting, naval engagements, guerrilla operations, pitched battles and major river crossings. No other great general in the world's history was ever put to such a diversity of tests, faced more varied opponents or fought in a greater variety of conditions, yet he is the only one who never lost a battle. Over the past century, scores of military historians and professional soldiers alike have analyzed Alexander in terms of how he influenced and developed the art of warfare. A compelling picture has emerged, revealing Alexander's contributions to the military art were greater than that of any other leader in history. In particular, his stratagems and ruses, many of which are still feasible, have been a source of intense study by many other of history's greatest generals and continue today to warrant examination in military academies around the world (Mixture 78).

There have been many works written about Alexander the Great, from biographies to studies of his Generalship or leadership qualities, various analysis' of his campaigns and battles, and even a study of his logistical system. This purpose of this study is to answer one primary question: Did Alexander use combined arms tactics to achieve his numerous victories? Imagine a modern army on today's battlefield not utilizing combined arms, an idea that simply doesn't seem plausible to even the most inexperienced warrior. However, the concept of "Combined Arms" was not a even a consistent part of U.S. Army doctrine until the 1976 edition of FM 100-5 (Herbert 7). The 1976 edition of FM 100-5 authored by General William E. Dupuy was an attempt to make formal changes to Army doctrine integrated with a new research facility, called the Combined Arms Combat Developments Activity (CACDA), at the U.S. Army Command and General Staff College (USACGSC) (Herbert 28). During WWII and the years following it, American military leadership thought that the tank was the main weapon of choice and that all other arms/branches were there to support it. As late as the beginning of World War II, that same military leadership

thought that the sole purpose of all arms/branches was to support the infantry, which was the main weapon of choice then.

The thesis of this paper is to prove that Alexander the Great successfully conducted his campaigns through the use of combined arms tactics centuries prior to its conception into the U.S. military. How would the world have been altered if wars were fought using combined arms tactics? Would the French have been beaten at the Battle of Blenheim in 1704 by England and its allies or the British themselves defeated by American soldiers at the Battle of Saratoga in 1777? If we are able to identify that Alexander's evolution of combined arms tactics is similar to that of our own, then what other strategic and tactical doctrine might we recognize of valuable importance by studying the history of past battles and military leaders? The following study will examine Alexander's key battles and campaigns as a process to analyze his doctrine towards conducting military operations, specifically the incorporation of combined arms tactics.

The methodology that will be used to construct this thesis will be primarily chronological in nature by researching historical battles for factual evidence and interpreting those facts as they might apply to combined arms today. To analyze the battles and campaigns of Alexander the Great this study will look at the following elements: historical background of events leading up to the battle; organizational structure of the army at the time of the battle referencing unit strengths when possible; technological development or tactical improvisation since the previous battle; dissection of the battle describing unit positions and citing significant maneuvers from either side; and a short summary capturing the chapter's key points.

To support the above methodology and analysis, this study is organized as follows: Chapter 1 describes the military and political situation in ancient Greece during the fifth and fourth century B.C. and establishes the rise of Macedonia during the reign of Philip II. Chapter 2 is a short study beginning from the time of Philip's death, through Alexander's ascendancy to the throne

of Macedonia, up to Alexander's campaign for consolidation of all Grecian city-states and allies. Chapters 3 through 6 review and examine the successive campaigns and battles of Alexander the Great in his quest for world domination. Chapter 7 documents Alexander's successors, or Diadochi. Finally, chapter 8 will link together all of the research and provide a conclusion based on the analysis.

For the historian conducting research on Alexander the Great, there are five historical accounts written during ancient times. Most historians agree that the primary source of information and the most reliable is written by Flavius Arrianus Xenophon of Nicomedia in his Campaigns of Alexander. Arrian, born just prior to A.D. 90, was a wealthy Greek and a also Roman citizen. Arrian studied philosophy under Epictetus in Epirus. He served in the Roman Imperial service, became a Roman Consul in command of two Roman legions with auxiliary troops, and eventually became governor of Cappadocia. Arrian retired from public service around A.D. 138 and became an Athenian citizen, ultimately holding the office of chief magistracy , the Archonship. The writings of Arrian are numerous, but unfortunately, most have been lost or destroyed. Arrian's most important book that was to be his claim to fame is the Campaigns of Alexander (*Anabasis Alexandri*), which he divided into seven books, eight if you include Indica. Indica is an account of the voyage of Nearchus' fleet from India to the Persian Gulf.

To write the Campaigns of Alexander, Arrian relied mostly on the first hand histories of Ptolemy's Memoirs, one of Alexander's officers and later king of Egypt, and of Aristobulus, a minor engineer officer in Alexander's army. Arrian also used the works of other lesser officers and quotes from Alexander's letters that appear to be written by Alexander's personal secretary. Arrian also had access to all works that had been written before him by other classical historians and he does use them sparingly throughout his book. Unfortunately, the majority of Arrian's resources have been destroyed and we must rely almost completely on his writings. Perhaps the

greatest loss are his ten books in Events after Alexander, of which all that remains is a short narrative. These books may have contributed significantly to the Wars of the Diadochi, of which we know very little.

The two primary translations of Arrian are by the Reverend E. Iliff Robson and Aubrey de Selincourt. Robson's translation is written in two volumes, Books I - IV in Volume I, and Books V - VIII in Volume II. To assist the reader in distinguishing which translation and volume is referenced, the following citation format is used: (Arrian {R} I:61) or (Arrian {S} 84). In the first example, Robson's translation is used and is found in Volume I on page sixty-one. Selincourt's translation is used in the second example and references page eighty-four. An additional technical note for the reader is that the modern abbreviations B.C.E. (Before Common Era) and C.E. (Common Era) will be used throughout the remainder of this study.

A second reliable source of Greek literature written about Alexander is from the famous biographer Plutarch. He wrote the Life of Alexander in the second century C.E. Plutarch's birthplace was the city of Chaeronea in Boeotia and lived from 46 to 120 C.E. He studied in Athens and Rome, was a tutor to the future emperor Trajan, was appointed governor of Greece for a short time, and like Arrian, also served as Archon. It was in his later years that Plutarch began writing Parallel Lives, a collection of the lives of the noble Grecians and Romans, which includes a short life of Alexander.

Another source is Diodorus, a Sicilian Greek of the mid-first century B.C.E., who wrote forty books in his Universal History, of which Book 17 is entirely on Alexander. A fourth source is the historian Quintus Curtius, who was a Latin author of the mid-first century C.E., who wrote the History of Alexander. Both of these historians relied mostly on the works of Cleitarchus, who unlike the previous historians, did not participate in any of Alexander's campaigns. Cleitarchus probably wrote his book around 310 B.C.E. while living in Alexandria. Another second century

C.E. writer is Justin, who primarily restates an earlier work by Pompeius Trogus, who in turn relied upon Cleitarchus. The first chapter of this study, written about ancient Greece and the rise of Macedonia, comes largely from the writings of another set of classical historians, primarily that of Herodotus, Thucydides and Xenophon.

In addition, there are numerous modern historians of which only a few are mentioned here, that have also written about Alexander. While it is hard to write something about Alexander that hasn't been written before, these newest accounts discuss strategy and tactics of war for several of Alexander's major campaigns. Because Alexander did not have his doctrine manually recorded, these writings can provide useful insight as a substitute for an eyewitness battle analysis.

Lieutenant Colonel Theodore A. Dodge, an officer in the New York volunteer infantry during the Civil War, was an author and military historian who wrote Alexander in 1890. Lieutenant Colonel Dodge recognized the value of viewing military experiences of the past with a more modern perspective and analysis. Dodge presents the reasoning behind Alexander's campaigns and why his art of war has been expanded by the deeds of the other great captains. Peter Green, a Cambridge-trained classicist, wrote Alexander of Macedon in 1991 as an expanded revision of a book he first published in 1970. Alexander of Macedon is a historical biography in which Mr. Green has combined the classic texts of Arrian and Diodorus with recent archaeological discoveries as well as new studies of Persian and Oriental archives.

General J.F.C. Fuller wrote The Generalship of Alexander the Great in 1960, nearly forty three years after first reading Lieutenant Colonel Dodge's book about Alexander. General Fuller became interested in Alexander after it struck him how much could be learned from Alexander's battles and be applied to tank warfare during World War I. General Fuller does not simply write another life history of Alexander, but provides an analysis of his battles and sieges. Another recent book, Alexander the Great and the Logistics of the Macedonian Army, was written by Donald W.

Engels in 1978. Mr. Engels presents the first systematic study of Alexander's logistical system and its impact on Alexander's strategy and tactics.

Before continuing this study, some introductory definitions on combined arms operations are necessary. First and foremost is that there was no distinction between combined arms (two or more combat arms), combined operations (two or more nations), or joint operations (two or more services) during the ancient period. Ancient armies often employed troops with special weaponry native to their region, to include navies, from various territory's or states but were under the direct command and control of the king or commanding general. Throughout this study the term combined arms will represent the combined arms team, combined operations, and joint operations.

Combined arms is the synchronization of two or more combat arms, such as infantry, engineers, navy, and cavalry to achieve an effect on the enemy that is greater than if each arm was used against the enemy independently. It is the coordinated action of multiple combat arms working in concert towards a common objective to destroy or disrupt the enemy forces. Additionally, ancient armies did not have the communication ability that the modern army possess, therefore, one does not see the instantaneous obedience to orders or coordination between arms as is found today.

A second key concept is the correlation between today's various arms and weapons with those available or developed during the classical period. There were ten major combat arms available to the various commanders of Alexander's army. For the purpose of this study, combined arms warfare of the Macedonian army is considered to be exercised when any combination of two or more of these ten elements are synchronized coincidentally for battle. There were additional arms or services necessary for the administrative and logistical support of the army but they are not considered in this tactical definition of combined arms warfare. The ten combat arms are as follows: Heavy Cavalry, Light Cavalry, Heavy Infantry, Hypaspist, Light Infantry,

Skirmish Infantry, Mounted-Infantry, Engineers, Naval Forces, and Siege Equipment. Other armies included some of the above units and also other arms, such as the chariot and elephant. Alexander did experiment with the chariot and the elephant but did not use them in any significant way during his battles and will not be included in this paper.

The ten combat arms can be sub-divided into three categories under the headings of cavalry, infantry, and special troops. Cavalry are those soldiers that fought while mounted on horses. Heavy cavalry wore armor protecting their legs, chest, and head and fought with a spear that was thrust overhead at their enemy. Light cavalry did not wear any armor except for a helmet and they fought with light javelins, spears, or bows. Cavalry during this time period did not use stirrups and could not charge their opponents with a leveled lance as during the medieval period. The typical cavalymen attempted to unhorse their opponents either by thrusting their spear at the enemies face or by killing his horse. The horse archer could naturally kill his enemy while remaining a safe distance away.

The infantry also included a heavy and a light infantryman, as well as the hypaspist, skirmish infantry and mounted-infantry. The basic infantryman fought on foot, even though he may travel by horse such as the mounted-infantry. The heavy infantry was the most heavily armored and also the least maneuverable. He fought with an eighteen foot pike, called the sarissa, in a dense formation. The next level down was the hypaspist, who wore less armor, carried a shorter pike, and was more maneuverable, but no less trained than the heavy infantry. The hypaspist also fought in a dense formation that was tactically situated between the heavy cavalry and the heavy infantry, creating a flexible joint between two distinctly different units.

Light infantry wore even less armor than and typically consisted of only a shield and a helmet. They carried a smaller pike or spear that could be used for stabbing or throwing as well as a short sword. Light infantry could operate separately in open order or together as a small unit.

There role was to provide flank protection or rear area security, and also to act as a second line of defense or as the tactical reserve. Skirmishers carried a variety of weapons, depending on their nationality, and all were missile-throwers. Some, like the Aetolians and Balearics, carried slings, while the people from Crete were famous for their archery skills. The remaining skirmishers, such as the Agrianian, Illyrian, or Thracian, carried several light javelins that would be thrown prior to any physical contact between the opposing forces. Skirmishers did not usually form together into a massed unit, instead, they operated independently forward of the phalanx or along the wings.

Although, Alexander did use their massed firepower on several occasions. Mounted-infantry are the last type of infantry used in Alexander's army. The first unit of mounted-infantry were not introduced into the campaign until after Gaugamela, but proved so successful that Alexander created more units of them. They were a heavy infantry armed with the sarissa or pike that fought entirely on foot. They were mounted solely for the purpose of speed.

The last group of combat arms could be collectively referred to as the special troops. These troops had a unique skill that was not employed during every battle, but could add significant combat power when they were utilized. Engineers were the sappers and miners of ancient times. They were used in the assault upon fortifications by using ladders or undermining walls, and by carving footholds in rocky mountain passes for the infantry. Additional skills they brought to the battle included building rafts and bridges as well as establishing fortifications and new cities.

The next unit of special troops are the naval forces. Original Greek triremes consisted of ten hoplites (marines) and up to one hundred seventy rowers, depending on the size of the warship. The strategy of naval operations during Alexander's time was to ram and board the enemy vessel, while in later years the strategy changed to less emphasis on ramming and more on boarding. This evolved from the production of bigger ships that were capable of holding one hundred fifty or more

marines but were less maneuverable in the water. The sailors during Alexander's reign were not slaves but free men drawn from the lower classes. Because of the few marines initially placed on the triremes, the rowers were also expected to throw javelins or be slingers and then help fight to capture the enemy warship.

The last combat arms unit is the siege equipment, or more specifically, the men that constructed and operated the siege equipment. Originally, siege equipment primarily consisted of large catapults designed to breach the enemy's fortifications or to clear the battlements of enemy soldiers. They were large pieces of equipment that were not very maneuverable and usually built on the spot for that particular siege. King Philip II of Macedon designed a smaller version of catapults that were constructed in such a way that they could be disassembled and easily transported from one location to the next. Because of this, Alexander is the first person to use catapults against enemy troops in the open on the battlefield or at river crossings in support of offensive operations.

GLOSSARY

Agema	Vanguard. "Basilikon agema" = Royal Vanguard, initially a battalion of Companion Cavalry and hypaspists, later to include Foot Companions.
BCE	Before Common Era, replaces Before Christ (BC).
Cadmaea	Greek term for citadel, a fortress on a commanding height for defense of the city.
Cardaces	Either heavily armed foreign mercenaries or lightly armed soldiers from Persian empire fulfilling their military service.
CE	Common Era, replaces Anno Domini (AD).
Chiliarchia	A unit of a thousand men; a chiliarchy. Equivalent to a regiment or brigade made from four syntagma, also commonly referred to as Taxis by Arrian.
Chiliarches	Commander of a "chiliarchy".
Companions	(or Personal Companions) A select number of individuals who served as advisors or courtiers in Alexander's traveling royal court and fought with the Companion Cavalry during battle.
Companion Cavalry	The elite Macedonian heavy cavalry. They wore metal helmets and a metal cuirass, but carried no shields. They carried a long spear (Xyston) made of strong cornel wood and a short, stabbing sword (Xiphos).
Diadochi	The "Successors" of Alexander. These were the senior leaders who divided up Alexander's empire amongst themselves after died.
Foot Companions	The elite Macedonian heavy infantry that formed the backbone of the phalanx. Many may have worn the metal cuirass while others wore a cuirass made from leather. They all wore a bronze helmet and carried a hoplite shield, a long spear (sarissa), and a short sword.
Hetairoi	A Companion. They were the Personal Companions who attended the king, and Companion Cavalry, an elite body of cavalry led by the Macedonian kings.
Hegemony	The leadership of one state or nation over others.

Hellespont	A strait connecting the Aegean Sea with the Sea of Marmara, currently referred to as the Dardanelles.
Hipparchy	At first refers to a group of Ile (cavalry brigade), whose numerical strength varies between two and eight ile. Later became a subdivision of the Companion Cavalry.
Hipparchos	Commander of a Hipparchia (Hipparchy).
Hoplites	Greek heavy infantryman, carrying a large, round flanged shield; a hoplite. They wore a "muscle-cuirass" and a bronze helmet in addition to carrying a large spear and a short sword.
Hypaspists	A Macedonian infantryman armed with spear and conspicuous shield, also referred to as a "hypaspist". The hypaspists were latterly referred to as the "silvershields" and the "Guards". The hypaspist carried a shorter spear than the foot companion.
Ile	Squadron of cavalry. Typically numbered between 150 to 200 men, however, the agema cavalry numbered 300 men.
Ilarches	The commander of an ile.
Kopis	A slashing sword, with curved blade used by the Persians, distinct from the straight, two-edged, pointed "Xiphos".
Lochos	(or Lochoi) For cavalry, a troop or subdivision of an ile consisting of about 50 men. For infantry, a file of sixteen men, a squad or subdivision of a tetrachia.
Mora	Greek term for Chiliarchia, a regiment of 500 men. Used occasionally by Arrian when referencing a Chiliarchia.
Panhellenic	The movement towards the political unification of all the Greek people.
Pelte	(or Pelta) A small, light shield of skin or wicker.
Peltasts	Originally, a lightly-armed Greek infantryman, with Pelta, but in the later fourth century were often more heavily equipped with a bronze shield and helmet. In Alexander's army they are synonymous with light infantry. They carried a lighter pike or spear and typically fought in units.
Pezetairoi	(or Pezetaeri) Macedonian heavy infantryman or "Foot Companions" recruited from different districts to form their own

	<p>taxis. "Asthetairoi" were those recruited from the towns in Upper Macedonia.</p>
Phalanx	<p>Line of battle, line of infantry, used specially in modern accounts to denote the dense Macedonian pike line, formed from four or more chiliarchia.</p>
Prodromoi	<p>Scout (= sarissophoros, i.e., lancer scout).</p>
Psiloi	<p>The original Greek form of lightly armed infantry, later replaced by the Peltast. In Alexander's army they are synonymous with the skirmisher or missile-thrower.</p>
Royal Bodyguards	<p>Initially seven officers, later eight, who were each in charge of small units of bodyguards to protect the king at all times and continued the training of the Royal Pages. They acted as general officers, chiefs of staff, and aide-de-camps to the king.</p>
Royal Companions	<p>(or Royal Squadron) The agema of Companion Cavalry.</p>
Royal Guards	<p>(or Royal Battalion) The agema of Hypaspists.</p>
Royal Pages	<p>A kind of OCS for upper class youths, which followed the Macedonian kings on active service performing the duties of an aide. After receiving a general education, they went on to serve in the Companion Cavalry or with the Bodyguards.</p>
Sarissa	<p>Macedonian infantry pike or cavalry spear, usually eight feet for the cavalry, ten feet for the hypaspist or hoplite, and eighteen for the heavy infantry. Sarissas twenty-one feet in length have been discovered but they are believed to have come from the Diadochi.</p>
Sarissophoros	<p>Lancer. In the Macedonian army (= Prodromoi = lancer scout).</p>
Satrap	<p>Greek form of Persian word meaning provincial governor.</p>
Stades	<p>(or Stadia) A unit of linear measurement equal to about 607 English feet.</p>
Synaspismos	<p>Close formation of the phalanx, "shield to shield"; often translated as locked shields.</p>
Syntagma	<p>The basic infantry unit or battalion of 256 hoplites formed from two taxiarchia.</p>
Talent	<p>One talent = 60 pounds of gold or silver, what was the weight an average man could carry in one day.</p>

Taxiarchia	A company of 128 hoplites formed from two tetrachia.
Taxis	Military unit in a general sense, but regularly applied to company size units of infantry in particular; often translated as brigade.
Tetrachia	A platoon of 64 hoplites formed from four lochoi (files).
Trireme	Galley with three rowers on each side in each section.
Xiphos	A Greek two-edged short sword, most commonly used for stabbing.
Xyston	A cavalry spear about eight feet long.

CHAPTER 1

THE REIGN OF KING PHILIP II

Even before 1977, there had been an increasing tendency amongst historians to view Philip not simply as the father of his famous son, but, in his own right, as one of the greatest Macedonian monarchs, and perhaps one of the most important historical figures of ancient Greece. His significance for the history of Macedonia is beyond doubt. When he came to power, his country had recently suffered considerable territorial losses, it was politically fragmented, militarily on its knees and culturally retarded; within the space of a quarter of a century he restored and extended its frontiers, welded the state into a political unit, made it the mightiest military power of the period and, as becomes clearer with every new archaeological discovery, raised the cultural level of Macedonia above that of much of the rest of Greece. Not only this, however; Philip is also acknowledged to have been a political figure of Panhellenic standing. He succeeded, by persuasion rather than by force, in achieving unity amongst the Greek city-states, without depriving them of their freedom. Finally--and this is often forgotten--he was one of the most attractive personalities of his time, for all the violence and passion of his nature. "Europe has never known a man the like of Philip, son of Amyntas" wrote his contemporary Theopompus in the preface of his monumental history dedicated to Philip (Hatzopoulos 8).

Fourth century B.C.E. Greece, which Macedonia and the current Balkans are considered part of for the purposes of this study, was a configuration of many separate and independent states. They were separated by natural geography as well as cultural differences. The key regions of the Aegean and Greek peninsula in fourth century B.C.E. include: Peloponnese; Epirus; Euboea; Thessaly; Macedonia; Thrace; Boeotia; Attica; Paionia; Chalkidike; Arcania; Illyria; Agriania; Aetolia; and Crete (Levi 12). Nevertheless, they all considered themselves to be Hellenes, they all shared similar religious beliefs in the same gods, and they had a common language. Another collective link between all the states was the substantial crop production and food resources available within the interior and lowlands of the region. This made Greece a highly desirable economic target of opportunity amongst other states and with outside regions, particularly Persia.

Around 550 B.C.E., the Greek states formed the Peloponnesian League, dominated by Sparta, as a united defense against the Persian invasions (Brownstone 14). However, most of the Greek cities along the Asia Minor coastline of the Aegean Sea were quickly seized by the Persian

King Cyrus after he came to power in 546 B.C.E. Meanwhile, mainland Greece was safe for a short time while the Persians consolidated their control of Asia Minor (Levi 129). The next excursion into mainland Greece by an outside power was Cyrus' successor, King Darius I. During the reign of Darius I (521-486 B.C.E.) there were various wars fought with the city-states of Greece, with the eventual subjugation of Thrace and Macedonia by the Persian Empire. This occurred around 511 B.C.E., which is also perhaps about the same time that Sun Tzu wrote the Art of War regarding war in China.

In 492 B.C.E. Darius again invaded Thrace and Macedonia to suppress a rebellion while his son-in-law Mardonios, set out with the Persian fleet to punish Eretria and Athens. Much of the fleet, however, was destroyed in a storm off the coast of Macedonia and the ships remaining had to return to Persia. The Persian invasions of Greece are best recorded by the Greek historian, Herodotus of Halicarnassus, who lived from 484 to 424 B.C.E. (Warry 24). This time period from 499 to 448 B.C.E. is commonly referred to as the Greco-Persian Wars.

In 490 B.C.E. Darius sent out another fleet under the command of Datis to invade Eretria and Athens. After he successfully destroyed Eretria the fleet attempted to land on the northwest coast of Attica, near the plain of Marathon. However, the Athenian army was waiting and successfully defeated the much larger Persian army on the plain. They then had to race back to Athens to defend their city against another possible landing by the Persian fleet. They were able to beat the Persians from reaching Athens first and thus prevented a second landing.

Darius' son and successor, Xerxes I, continued the war, annexing Greek states into the Persian Empire through a series of combined land-sea expeditions. One noteworthy military accomplishment and engineering feat was the construction of two floating bridges across the Hellespont (the strait between the Aegean and the Sea of Marmara), over which Xerxes' army of approximately two hundred thousand men could cross. They continued down into Thessaly along

the Thracian and Macedonian coast while the Persian fleet maintained a parallel trace.

Considering the numbers of the Persian army, the Greeks retreated until they came to the Pass of Thermopylae. After being outflanked, the majority of the Greek army again retreated back to defend Athens. King Leonidas and three hundred Spartans, along with eleven hundred Thebans and Thespians remained to defend the pass. They were eventually destroyed to the last man in a pitched battle, betrayed by a Greek traitor.

The Persians now had a clear road to the city of Athens and central Greece. Xerxes planned to watch his army destroy the outnumbered Athenians from a nearby hill, but he instead observed his fleet becoming engaged in a sea-land battle off Salamis where it was completely destroyed by the Athenian navy. Though this is considered a naval fight, it was essentially a land battle fought on the decks of the tightly packed ships, and the more heavily armored Greek hoplites were victorious. The final setback for the Persian army was the resounding defeat by the Greeks at the Battle of Plataea in 479 B.C.E. Persia and Greece remained in a continual state of lessening war until the Peace of Callias in 448 B.C.E., at which time the Greco-Persian War was temporarily halted.

The early Persians first began their campaigns relying on the infantry and pike that was the standard choice of combat for most countries. Although the use of chariots is found among other early empires, it was already on the decline by 1500 B.C.E. (Arneson 10). However, by the time of Darius I, the Persians had already adapted heavy cavalry and mounted archers as the main weapons of battle, developed primarily as a defensive countermeasure against their mounted enemies of the Steppe. Cavalry demonstrated itself to be an efficient use of combat arms on the vast plains of Asia, but proved to be undesirable in the mountainous regions of Greece. Even then, the armies still sought level plains for battle upon which their phalanxes could maneuver without

disruption. For many centuries the cavalry was only the arm of the rich nobles, those having enough money to pay for the extra trappings and care that the horses required.



Fig. 1. Map of Ancient Greece and Macedonia. Reprinted from J. F. C. Fuller, *The Generalship of Alexander the Great* (New Brunswick: Rutgers University Press, 1960), 27.

During fifth century B.C.E. the Greek states were in a continuous state of civil war between themselves, forming temporary alliances that, at times, included Persia. The First Peloponnesian War, 460-445 B.C.E., began as a continuation of the decline of the Greco-Persian War. The Greek states first formed the Delian League as a coalition to repel Persian advances but soon came under the sole power of Athens. The Delian League gradually turned into an Athenian maritime empire and aroused the enmity of both Sparta and Corinth, causing the other Greek states to form their own alliance to oppose Athens' growing power (Kohn 337). What resulted was a series of indecisive wars fought in Greece between various alliances centered with either Athens or Sparta. Eventually peace was initiated by the Athenian, Pericles, from 445 to 432 B.C.E.

The Second Peloponnesian War, 432-404 B.C.E., began when Sparta declared war on Athens for breaking the peace agreement. Again, various cities and states formed into alliances either with Athens or Sparta. Through a series of ruthless campaigns and sieges, the war flowed from one side to another without anyone emerging as the overall victor. Only after the destruction of the Athenian fleet and a siege of starvation was Athens forced to surrender to Sparta, at which time the Delian League was dissolved.

Occurring at the same time in Persia in 401 B.C.E. was the revolt of Cyrus the Younger against his brother, Artaxerxes II, the emperor of Persia. Though not directly related to the Greek internal wars of the time, it did have an impact on the future campaigns of Alexander the Great. Part of Cyrus the Younger's army was a contingent of Greek mercenaries led by Spartan and Athenian officers. Even though Cyrus was killed at the Battle of Cunaxa and most of his rebels deserted, the Greek contingent stood their ground and defeated Artaxerxes' army. They made peace with Artaxerxes and were invited to a feast in their honor hosted by the Persians. After their senior officers were killed at the feast by trickery, the Greek mercenaries began a long retreat home led by their junior officers. One of these officers was the Athenian Xenophon, who wrote of the

March of the Ten Thousand across one thousand miles of enemy-held territory (Brownstone 27). One of Alexander's stated purposes to invade Persia was to punish the Persians for their hostile treatment of the ten thousand Greeks. Alexander also read Xenophon's historical account and studied the information about the geography of the region for future reference.

Spartan supremacy ruled in Greece from 400 to 371 B.C.E. under various leaders which included Lysander and King Agesilaus. Sparta became the first city-state devoted entirely to war, requiring all males be trained in the skill of armed combat (Kohn 281). At various times Sparta conducted campaigns in Asia Minor against Persia, then against Athens, Corinth, Argos, and Thebes who were allied with Persia, then again against Athens but this time allied with Persia. Through it all, Sparta retained hegemony of Greece. The turning point came in 371 B.C.E. at the Battle of Leuctra, which transferred the power from Sparta to Thebes.

The Theban Period, 371-355 B.C.E., brought about evolutionary changes in tactics under the leadership of Epaminondas. Outnumbered nearly two to one by Sparta at the Battle of Leuctra, Epaminondas increased the depth of his left wing while simultaneously delaying the advance of his center and right wing. While his center and right wing advanced slowly to keep the Spartan center and left wing occupied, Epaminondas led his left wings assault upon Sparta's right wing. "This is the first known example in history of the deep column of attack and of a refused flank, prototype of the holding attack and main effort of more modern times" (Dupuy 42).

In combination with the attack by his left wing, Epaminondas also introduced the use of cavalry as an effective screening force between the Spartans and his own thinly spread center and right battle lines. As the Spartan right wing collapsed, Epaminondas swung his own left wing into the flank of the Spartan center and left wing, winning a decisive battle and shattering the Spartan military forever. In a surprising change in policy, Sparta and Athens then formed an alliance to oppose Theban supremacy but the military genius of Epaminondas withheld all opposition. At the

Battle of Mantinea in 362 B.C.E., Epaminondas again utilized his oblique attack with success. He, however, was killed in the process and his army was unable to follow through with the maneuver and were defeated.

Philip II of Macedonia began the next round of campaigns striving to unite the city-states of Greece. He was not the first leader to attempt this, but he was the most successful leader to date. Others that had tried before him include Themistocles the Athenian, Epaminondas the Theban, Pericles the Athenian, Thucydides, Isocrates, and Lysander and Agesilaos from Sparta. Philip II's reign, from 359 to 336 B.C.E., began by first securing his own throne from other pretenders before initiating his strategy of the Macedonian period of dominance over all of Greece and ultimately to punish Persia for the Greco-Persian War.

During the Third Sacred War, Philip acquired colonies in Thrace and Chalcidice through a series of conquests and semi-peace agreements with Athens. The next several years saw Philip extending his kingdom to the west with the subjugation of Epirus, Thessaly, and Illyria. He also gained control of the northern wild tribes, the Scythians, and the rest of the colonies in Thrace by 339 B.C.E. Philip was then free to focus his efforts towards southern Greece. One group of Athenians, led by Demosthenes, had opposed all Macedonian alliances and continuously tried to persuade the Athenian people to rise against Philip. Another group of Athenians, led by Isocrates, supported Philip's idea that all Greeks should unite and wage war against Persia. Isocrates wrote many papers describing the qualities of the various leaders of the time and eventually selected Philip as the most capable ruler to lead the Panhellenic league against Persia.

Athens and Thebes began the Fourth Sacred War in one last attempt to oppose Philip's growing empire. That war was settled at the Battle of Chaeronea, which Alexander III participated in, and Philip became the irrefutable ruler of Greece. While Philip was fighting the Scythians, the Thebans had taken control of Thermopylae in an attempt to block Philip from entering southern

Greece. Philip had foreseen this move earlier and prepared a second route through the mountains. Even though Philip arrived in Phokis and could easily have marched into Attica by late 339 B.C.E., the question remains why the battle of Chaeronea did not begin until August of 338 B.C.E. One speculation is that he was awaiting more troops and reinforcements before he began his campaign. A more common theory is that Philip had stated all along that he did not want war with Athens and that maybe he was holding out for a peaceful resolution (Hatzopoulos 108). Whatever the reason, battle was ultimately the final method for Philip to gain control over southern Greece.

Upon the conclusion of the Fourth Sacred War and the absolute domination of Greece, Philip was finally able to begin planning for his grand strategy of defeating Persia. All of the Greek states, except Sparta, formed the Hellenic League in alliance with Macedonia for the sole purpose of freeing the Greek cities under Persian control in Asia Minor. An advance reconnaissance was conducted but before any plans were developed King Philip II was assassinated.

Shortly after acquiring the throne, Philip began to make the first of many improvements to the organization of his army and kingdom. Many of these evolutionary tactics were inspired during Philip's years as a hostage under the famous Theban, Epaminondas. The two had become acquainted while Philip was performing the ancient ritual of hostage trading to secure the allegiance of noble families. One did not commit an act of war against the ruling party when members of your family were being held hostage by them. The hostages were treated well and in the case of Philip, came under the direct tutelage of Epaminondas himself. In any event, Philip learned his lessons well and even went on to improve on the Theban military system.

Significant improvements that Philip introduced to his ancient army in 359 B.C.E. still continue in today's modern army in one form or another as standard military doctrine. These include but are not limited to: upgrading the equipment of the heavy infantry; the development of

mobile catapults; assigning surgeons to the field army; modernizing infantry weapons; building a scientific organizational structure within the army; creating the first light infantry called the hypaspist; division of cavalry into regiments; and organizing a national army.

Since the Peloponnesian Wars the Greek armies had begun discarding some of their heavier armament in order to be more mobile on the battlefield. Philip's army underwent a reformation back to the heavier equipped infantry as a way to offset his smaller, less experienced army against his larger and stronger enemies. Philip brought back body armor in the form of the muscle-cuirass, leg greaves, and replaced the Spartan helmet (pilos) with the Macedonian Phrygian style helmet. After the lighter armed Greek armies were defeated by the more heavily armed Macedonian phalanx in 338 B.C.E. at Chaeronea, the Greek armies began arming themselves more heavily also (Sekunda 32).

Catapults were not invented by Philip since history records their previous use as early as 1000 B.C.E. in various forms of siegecraft, but he has been credited with improving their design to meet his requirements. Catapults were previously quite large and heavy machines that required intensive manpower and time to construct, but were worth the investment considering a siege would last for several months to several years. Philip had his engineers redesign the machines so that they were smaller and could be disassembled and carried by horse to the battle, then hastily reassembled using wooden pegs. These could then be used either in sieges or in combat operations on the field against enemy troops in the open (Dupuy 46), although there is no recorded use against troops in the open during Philip's reign.

In all the campaigns recorded by history, surgeons originally remained behind in the city when the army went campaigning. The assignment of surgeons to the field army by Philip may have helped reduce battlefield casualties, even with their crude methods, but it could certainly have

helped with the troops morale simply by knowing medical support was close-by. This may also have led to the creation the first field hospital, of which there is some evidence (Dupuy 47).

Another of Philip's innovations was the evolution of the spear to the sarissa (pike). Early Greek armies consisted of heavy infantry called hoplites armed with eight to ten foot spears formed into a phalanx. The tactics were to simply form up into a large phalanx, about eight men deep, shoulder to shoulder with shields in front and attempt to push the enemy phalanx off the battlefield with their spears. The side that pushed the hardest would cause the other phalanx to break formation first and be slaughtered during the retreat. In addition to the normal helmet, breastplate, greaves, and a short sword, Philip's soldiers carried a sarissa that was typically longer than thirteen feet and a large shield that protected his entire body. Some accounts give the length of the sarissa as fifteen to eighteen feet long and in some cases even twenty-one feet long. The longer weapon gave Philip's army an edge since they were able to outreach all of their opponents and present a larger mass of weapons. An army with the short spears were only able to present the front ranks weapons, whereas Philip's army was able to present five rows of sarissas because of the extended length. Philip also reduced the size of the spear tip so that it would penetrate armor better. His soldiers became known from this time forward as phalangites instead of hoplites and this is also where the term phalanx originated from.

The most important change that Philip introduced was the organization of the Macedonian phalanx into the first scientifically organized military system in history (Dupuy 38). The concept of a phalanx was not new, neither was the use of different levels of organization. As mentioned previously, earlier armies also used the heavy phalanx for combat but only as a solid mass pushing the enemy off the field, occasionally protected on its flanks by cavalry and out front by skirmishers. The problem was that the earlier phalanx could not easily maneuver except in their original direction of attack. Philip integrated other arms into a structured force of smaller units

which allowed his army more tactical maneuverability on the battlefield than simply the frontal attack.

The organization developed by Philip II's phalanx is similar to that of our own army: four lochoi (files) of 16 hoplites each formed a tetrarchia (platoon) that consisted of 64 hoplites, two tetrarchia's composed a taxiarchia (company) of 128 hoplites, two taxiarchia's formed a syntagma (battalion) of 256 hoplites, four syntagma's of 1,024 hoplites made a chiliarchia (regiment/brigade) which was also commonly referred to as Taxis, and four chiliarchia's formed a simple phalanx (division) of 4,096 hoplites. In addition, the simple phalanx also called for two peltasts and one psilos for every four hoplites and a epihipparchy (cavalry) of approximately 1,024 horses. Therefore, a simple phalanx consisted of 4,096 hoplites, 2,048 peltasts, 1,024 psiloi, and 1,024 cavalry for a total of 8,192 armed fighting men (Dupuy 45). Psiloi consisted of bows, javelins, darts, and slings and were stationed in four ranks out in front of the main battle line acting as skirmishers. Peltasts carried light pikes and were formed up in eight ranks behind the main battle line. Two simple phalanxes formed a double phalanx (corps), and four simple phalanx's combined to make a grand phalanx (army) of about 32,800 men (Dodge 150).

The idea of breaking down the phalanx into tactical units was not Philip's innovation, but he did modify and improve the idea. According to Thucydides a similar version was used by Sparta in 418 B.C.E. at the Battle of First Mantinea (Hackett, 63). Thucydides gives a description of that battle but only mentions three levels of command as the enomotarchoi, pentekonteres, and the lochagoi. The enomotiai (platoon) had approximately 32 men, with eight men each in four files. The pentekostys (company) had four enomotiai for a total of 128 men. Four pentekostys of 512 men formed a lochos (battalion) and seven lochoi comprised an army of 3,584.

Xenophon gives a slightly different version of the same Spartan army organization. He writes of only two enomotiai in a pentekostys, two pentekostyes in a lochos, and four lochoi a mora

(regiment). Six morae combined to make an army of about three thousand men. Even though the two versions differ, the important factor is that Philip added more levels of command by creating additional maneuver size elements. This allowed him to be more flexible and versatile on the battlefield over other armies.

A typical phalanx prior to Philip's changes marched in open order of eight men per file, occupying six to eight feet of frontage per file. Before they went into the attack the phalanx formed up into close order of four men per file, about three feet of frontage per file. This was close enough together that the shields of one file nearly touched the shields of the adjacent file to the right. They also used the closed shield formation in which the shields overlapped the adjacent file shields. Marching in open order left space around each man to move more rapidly and to maneuver if necessary. Being in the open order also allowed for the files to create lanes in their formations for their forward skirmishers or cavalry safe passage through. These same lanes also allowed enemy charioteers to charge the phalanx without disrupting the formation as severely had they been in close order. To go into close order formation for combat, the last four men of each file moved up alongside the front four men. This in effect filled the gap between the files and provided better protection with their shields against enemy weapons.

Besides the additional organizational structure Philip created, he also doubled the depth of the Macedonian phalanx from eight to sixteen men deep, thereby adding more mass at the point of attack. This is greater than the typical Greek phalanx except for the Thebes, who under Epamonidas had increased his army's phalanx on one wing up to thirty two men deep. The other wing remained at eight men and was used to hold the enemy in place while the larger wing swept through their opposition and attacked the flank of the fixed wing.

Philip II also created a light infantry soldier who was trained in the maneuvers of the heavy infantry, calling them the hypaspists or Royal Guards. He began with one battalion of guards

containing one thousand men and which were eventually increased to three battalions of one thousand men each by the time Alexander began his march in Asia Minor. One of the elite battalions was designated as the Agema, or Royal Battalion, which held the place of honor on the extreme right flank of the infantry (Arrian 35). The hypaspists were a combination of the heavy phalangites and the lightly armed peltast, bringing together discipline and agility onto the battlefield. The peltasts were skirmish infantry who may or may not have any body armor, used a much smaller shield, and carried a much shorter spear. The hypaspists received the same amount of tactical battle field drilling as the phalangite soldiers so they were as effective when fighting as a massed unit. However, the hypaspists were also equipped with the smaller shield and a shorter sarissa between eight to ten feet which made them more mobile and flexible on the battlefield. The hypaspists were stationed between the slower heavy infantry and the fast heavy cavalry on the right wing providing better flexibility between the two.

Under Philip's direction the cavalry (Hetairoi) was separated into distinct formations with clear lines of responsibility closely resembling the infantry phalanx. Eight ile (squadron) formed a hipparchy and two hipparchies made up an ehipparchy (small phalanx); two ehipparchies a wing (double phalanx) and two wings a epitagma (grand phalanx) (Dodge 150). Greek cavalry formerly consisted of only two units; the heavy cavalry used as shock troops and light cavalry used first as scouts and then placed on the flanks of the phalanx to prevent flank attacks. Philip utilized two formations of heavy cavalry, one on either side of his phalanx. Previous armies had the heavy cavalry only on one flank, which was mostly consisting of the noble class. This was because horses were uncommon in Southern Greek states but became increasingly more common the further north one traveled. Therefore, as Philip increased more regions to his empire, this led to the Boeotians and Thessalians providing more cavalry to his army than the rest of the Greek states.

Additionally, the second formation of heavy cavalry was strong enough to fix the enemy right flank in place while the stronger Macedonian right flank was able to roll up the enemy's left flank.

The cavalry formation to the right of the phalanx was the Royal Companion cavalry, so called because they were personally led by Philip into battle. They also had a Royal Squadron that was called the Agema Squadron, which was similar to the Agema Battalion because it too was comprised of the elite warrior. The left wing formation of heavy cavalry were the Thessalian cavalry who were no less trained or equipped than the Companions. Both heavy cavalry formations wore the standard breastplate, helmet, greaves and shield, in addition their horses also had scale-armor headpieces and breastplates. Their main weapon was a ten foot pike that could be used as a lance or thrown like a javelin. In front of the heavy cavalry were the light cavalymen, carrying a variety of weapons: javelins, lances, and bows. Their purpose was to provide screening, reconnaissance, and flank protection for the phalanx and were called Prodromoi (Scouts). The only armor that they wore was a helmet. Other intermediate formations called Sarissophori (Lancers), were equipped as lancers or capable of fighting on foot, much like dragoons of later years. These horsemen wore lighter armor and used lighter weapons than the heavy cavalry (Dupuy 46).

Unlike the previous Macedonian and Greek armies which were a combination of farmer "reservists" or mercenaries called up as needed, Philip created the first national army. His soldiers were paid for performing a service to the nation, unlike their counterparts who were expected to fight for their city-state or nation whenever the need arose. Philip's soldiers were paid according to the position they held in the formation and by which unit they were assigned to. Front ranks and the rear rank of each file were paid more than the soldiers in the middle of the file.

Similarly, a hypaspist received thirty drachmai per month, whereas a pezetairotai (Foot Companions) may have only received twenty-five drachmas (Hatzopoulos 40). Officers received

more than the dekadarchia (non-commissioned officers), who received more than the ordinary soldier. Philip also created the promotion system in his army, where any commoner could achieve rank and nobility through acts of bravery. They were also different from Spartan hoplites in that they were volunteers who committed themselves to obligatory service instead of a mandatory requirement forced onto them by the state.

An earlier Macedonian King, Alexander I, actually instituted the beginnings of a national army when he formed the hetairoi (Companion), who were aristocrats that were given land in return for dedicated military service to the king. Philip expanded this to include large landowners into the hetairike hippos (Companion Cavalry), creating a much larger cavalry than the other Greeks. His most important recruiting method was the creation of the pezetairoi (Foot Companions), who also received smaller mounts of land. These served as heavy infantry in the phalanx but it extended the personal relationship from the king to the ordinary Macedonian or allied citizen. This helped integrate more of his territories into his kingdom and increase his prestige among the commoner. One method of measuring Philip's expansion is to look at the four known battle figures recorded of Philip's army.

There were ten thousand infantry and six hundred cavalry in his first major battle in 358 B.C.E. In 352 B.C.E., twenty thousand infantry and three thousand cavalry were deployed, and by 340 B.C.E., there was a total of thirty thousand men. At the battle of Chaeronea in 338 B.C.E., there were thirty thousand infantry and two thousand cavalry deployed. These numbers are not necessary exact, but they do reflect a marked increase during Philip's reign. A second measurement of Philip's expansion comes from a statement that said eight hundred hetairoi owned more land than ten thousand of the richest Greek men (Hatzopoulos 42).

At the Battle of Chaeronea in 338 B.C.E., Philip defeated a much larger Athenian-Theban army, finally completing his unification of Greece. Philip went into battle with approximately

thirty two thousand men against an enemy of Thebans and Athenians with fifty thousand. History does not record the precise unit designations or locations of the individual units of either side involved. What little is known is that there were five ilae of Thessalian cavalry on the left flank and six ilae of Macedonian cavalry on the right flank for a total of two thousand horse. The remainder of Philip's army was the phalanx of approximately thirty thousand heavy infantry.

The Theban Sacred Band was positioned in the place of honor on the far right wing of the Athenian-Theban army and the Athenian infantry on the left. Philip commanded the right wing of Macedonian horse while he placed his eighteen year old son, Alexander, in command of the Thessalian cavalry (Dodge 128). The Greek position extended obliquely across the valley of the Kephisos, with one flank resting on the river, and the other on hills to the south. A frontal assault by Philip would have been disastrous because of the oblique defense, and outflanking was impossible because of the river and the hills.

Based on accounts from unidentified authors, Philip began an orderly withdrawal or a wheel maneuver of his right wing, enticing the Athenians forward which created a breach in their line. It appeared that the battle was going poorly for Philip as the Athenians were successful in their initial attacks against his right wing cavalry. Philip was able to check the Athenian advance only by unleashing his powerful phalanx at the right moment, when the enemy's left phalanx became separated from the center. It has also been recorded that Philip was able to rout the enemy left wing and pivot left into the enemy center because Alexander had vigorously charged the Sacred Band and killed them to the last man (Dodge 129).

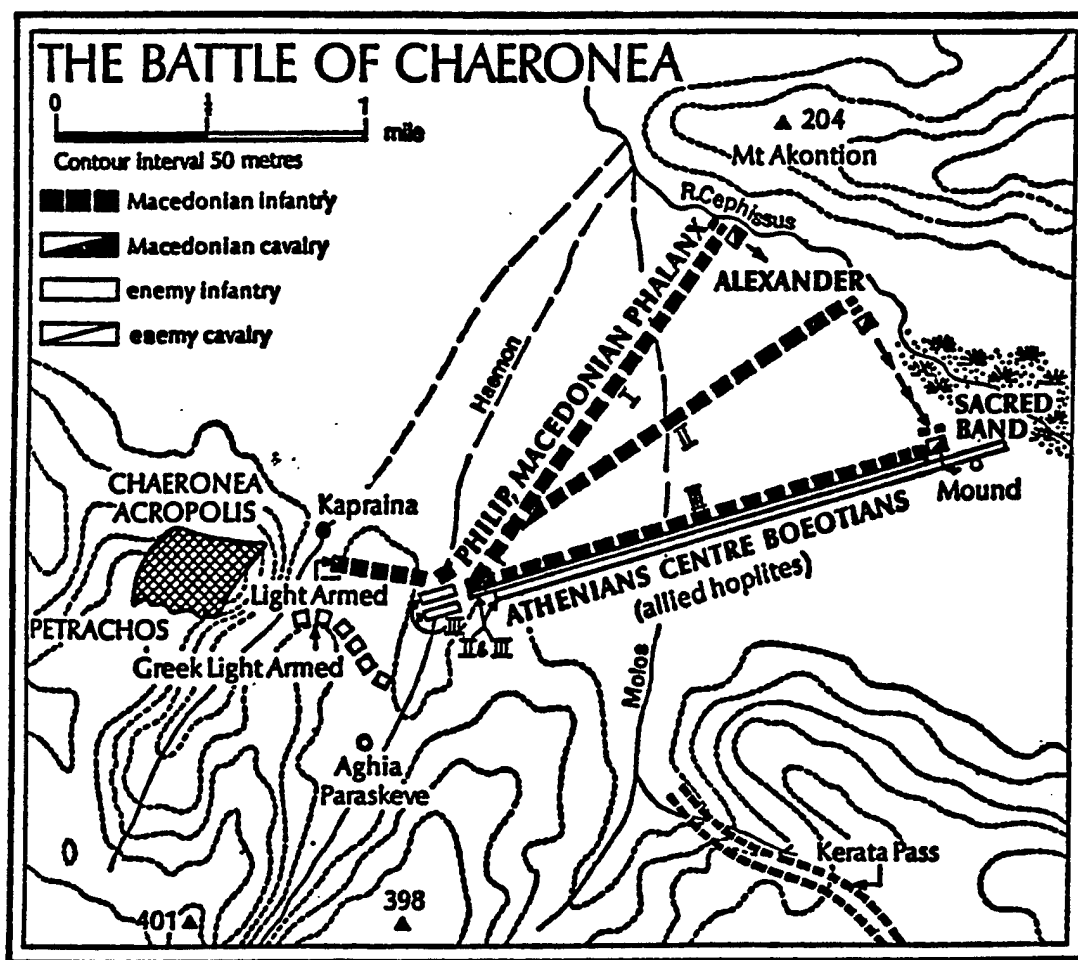
History only records the destruction of the Sacred Band and that one thousand Athenians were killed and two thousand were captured of the six thousand Athenians present. Lending more credence to the previous theory of Philip's desire for peace with Athens was his unusual mercy displayed to the captured Athenians. He released all Athenian prisoners without ransom before

there had even been a peace agreement reached. He did not treat the Thebans with as much mercy because he held them responsible for breaking a current peace alliance.

The battle could easily have been a defeat for Philip if he had not chosen the right moment when to engage his heavy phalanx and it was not for Alexander's timely, if not rash, charge against a superior enemy. Alexander's position on the left wing was to keep the stronger enemy in check until the Philip's right wing was able to roll into their flank and defeat them. It was in this battle that Alexander distinguished himself as a competent leader and fearless warrior that would secure the army's loyalty to him upon the death of his father.

In summary, while Philip made tremendous steps towards the evolution of the doctrine and tactics of the Macedonian army, he did not use combined arms tactics to defeat his enemies. He still used the traditional method of attacking first with his cavalry, hoping to disrupt the enemy and force them to flee from the battlefield in a complete rout. Only when Philip was in great distress or if he had succeeded in separating the enemy forces did he launch his infantry. While it takes a great commander to judge the exact moment when to launch an attack at the precise location of the enemy's weakness, it was not a coordination of effort between his various combat arms.

Additionally, Philip used his skirmishers or missile-throwers as an independent unit only against the enemy's similar forces. He did not incorporate them into his assaulting forces. Philip's success can be attributed to his brilliant diplomacy and unusual leniency towards the enemy for this period, to the technological improvements which he brought about, and his astute tactical assessment of the situation.



Phase I
Macedonians advance; Greeks stationary,

Phase II
Philip retreats, his centre and left advancing; Athenians, Centre and Boeotians advance to left front, but Sacred Band stands firm.

Phase III
Alexander charges, the centres engage, and Philip drives the Athenian wing up the Haemon valley.

Fig. 2. Map of Battle of Chaeronea. Reprinted from Peter Green, *Alexander of Macedon* (Berkeley: University of California Press, 1974), 73.

CHAPTER 2

THE CAMPAIGN OF CONSOLIDATION

The Persian monarch had foreseen the threatening danger to his kingdom from restless Alexander. He began to distribute money among the anti-Macedonians of Greece. The rumor of the death of Alexander before Pelium determined Thebes to revolt and eject the Macedonian garrison from the Cadmaea. Athens and other cities promised active aid. So soon as Pelium was taken Alexander marched rapidly southward. In two weeks he covered three hundred miles over a mountain road, and appeared suddenly before Thebes. He was anxious to save the city, but the misguided Thebans pronounced their own doom. The town was stormed, sacked and razed to the ground, and the Theban territory added to that of its neighbors, late its vassals. Athens begged off. In one year this young king of twenty had firmly seated himself on his throne, had made himself master of Greece, had utterly defeated the Danube barbarians, had reduced the Illyrians to obedience and had welded the shackles on Hellas. He was now ready for Persia (Dodge 209).

After the Battle of Chaeronea, the time was right for Philip to implement his great ambition to invade Asia Minor and conquer the Persian dynasty. However, Philip's plan first required him to increase his political and military hold over the remaining Greek states. At a meeting with representatives from all of the Greek states except Sparta, Philip created the Hellenic League of alliance between Greece and Macedonia for the purpose of freeing Greek cities in Asia Minor from Persian rule. He was selected as the chairman of the League and commanding general of the combined Greek-Macedonia army. Philip began final preparations of the invasion and sent an advance party under the command of his most trusted general Parmenio into Asia Minor. Parmenio was to secure a beachhead for Philip's main body and to begin reconnaissance of the Persian army. Fortune dealt Persia a short reprieve though when Philip was assassinated in 336 B.C.E. at the height of his career.

Alexander was not automatically assured the ascension to the throne of Macedonia. There were other Macedonian royal families that attempted to gain control of the throne but Alexander dealt with all contenders quickly and ruthlessly by executing them. Another threat was also ruthlessly removed by Alexander's mother Olympias. She had previously been set aside by Philip

for a new queen, Cleopatra. Olympias, acting without Alexander's knowledge, had Cleopatra and her infant daughter put to death and eliminated any further legal claims to the throne (Warry 71). Upon his succession to the throne, Alexander went into Greece and asked them all that he be allowed to lead the army into Persia in place of his father. They all agreed except for Sparta, who claimed that they do not follow any foreigners into battle, Sparta is supposed to lead all others in battle (Arrian {S} 42). Some cities began talks of rebellion but quickly submitted to Alexander when he marched towards them with his faithful army. The largest threat still remaining to Alexander was a rebellion by northern barbarian tribes in Thrace and Illyricum followed by revolting Greek states trying to gain control of the Hellenic League.

Alexander knew he had to suppress any uprising within his empire before he could continue with the planned invasion of Persia. He could not leave behind any unsubjugated people that might pose a danger to his rear or to his only supply line into Asia Minor. So when he heard that Syrmus, King of the Triballians, a northern Thracian tribe, was rebelling he immediately marched north towards Thrace. His first encounter was with a tribe of independent Thracians who tried to block his advance through a narrow mountain pass. They had barricaded themselves behind large carts on a hill overlooking the pass. The carts were also intended to be used as a shock weapon that could be pushed down onto the advancing Macedonians and break their charge.

Alexander had instructed his men that could to part and make paths for the cart to pass through and those who were too tightly packed to lay down beneath their shields and let the carts pass harmlessly overhead. His men performed exactly as directed and no Macedonians were injured. Alexander then positioned his Cretan archers from the right wing into a better tactical position in front of the heavy phalanx where their weapons could cause more damage to the Thracians. He also took personal command of his royal battalion and the guard battalions as well

as the Agrianes slingers and moved the entire force to the left wing. He quickly enveloped the Thracians, killing fifteen hundred of them before they could escape.

Alexander then marched on the Triballians who had positioned themselves defensively encamped in woods along the Lyginus river. He again reorganized his infantry to best suit the terrain and deny the enemy their advantage of the woods. The archers and slingers were deployed well in front of the phalanx, loosing their missiles while advancing on the run. The Triballians emerged from their protection in the woods to chase away the lightly armed skirmishers, who did not run away like the Triballians expected, but remained engaged until the cavalrymen could rush forward and provide relief for the besieged skirmishers. Alexander had also placed his heavy infantry into columns instead of the usual phalanx so that they could advance faster and with more maneuverability and engage the enemy before they could withdraw.

This would have been a risky operation if he was opposed by a stronger enemy, but it was in fact the speed and not the strength of his army that would be the deciding factor. If the Triballians had chosen to remain in the woods then Alexander's phalanx would not have been effective. Equally important is that Alexander did not give the Triballians the opportunity to retreat back to the safety of the woods after they had chased off the skirmishers. As it was, Alexander's plan was highly successful and succeeded in killing three thousand of the army before darkness set in. This allowed the rest of the Triballians to escape and join up with the remaining Thracians on an island in the Danube. Alexander had planned to attack the island by boat but there were too few landing sites, which were also heavily guarded, and the river was too dangerous to maneuver in. As it turned out, opportunity presented itself in the form of another enemy, the Getae, who appeared on the north bank of the Danube river.

The Getae were a very warlike tribe of Celtic origin and had assembled four thousand cavalry and ten thousand infantry to prevent any river crossing operation by Alexander. Alexander

made a night crossing with fifteen hundred cavalry and four thousand infantry in boats collected from local natives. Early the next morning, Alexander advanced across an open cornfield with his phalanx in close order and their sarissas held horizontally to the ground and perpendicular to their route of march. This flattened the corn stalks so that his cavalry, following directly behind the infantry, could move unimpeded across the field until they reached open ground. Once they reached the open ground, Alexander brought his cavalry up to the right flank of the phalanx and charged the Getae. They did not stand and fight but instead fled before him because they were too impressed by the sudden appearance of Alexander and his army. He proceeded on to the Getae town and destroyed it after he had taken everything of value. Alexander then retreated back to the safety of his camp on the other side of the river (Arrian {S} 46).

Shortly thereafter, the Triballians, Getae, and some other tribes sent envoys to Alexander suing for peace. They all pledged support to Alexander and vowed to return to their homes without anymore war. Alexander had now protected his northeastern boundary and established a secure supply line from Macedonia to Persia, although he was not as confident as he wanted others to believe. "Alexander asked the Celtic envoys what they were most afraid of in this world, hoping that the power of his own name had got as far as their country, or even further, and that they would answer, 'You, my Lord.' However, he was disappointed; for the Celts, who lived a long way off in country not easy to penetrate, and could see that Alexander's expedition was directed elsewhere, replied that their worst fear was that the sky might fall on their heads" (Arrian {S} 49).

Alexander's next campaign was against the Illyrians along his north western border of Macedonia. He had received word that Clitus, King of Illyria, along with the Taulantians and the Autariates, were in revolt and that they intended to attack him. This revolt was very important for Alexander to put down since the Illyrians controlled the only open pass into western Macedonia, which Philip had secured in earlier wars. It might also influence other cities in Greece to rise up

against Alexander, causing further delay to his Persian campaign. As Alexander marched against King Clitus, he was justly concerned about protecting his rear against the Autariatians. Langarus, King of the Agrianians, an old friend of Alexander and an ally of Macedonia stepped in by attacking the Autariatians in their own country. This act of friendship efficiently solved a major portion of Alexander's troubles. He was now able to concentrate his efforts directly against Clitus and King Glaucias of the Taulantians.

Besides outnumbering the Macedonians several times, Clitus was in control of the city of Pelium while Glaucias controlled all of the surrounding heights. If Alexander attacked either the city or the hills, whichever forces were unopposed could attack the rear of Alexander's army. Alexander, whose army was short of supplies and his lines of communication cut off from Macedonia, could not afford a prolonged siege, whereas Clitus and Glaucias had well stocked supplies and could afford the time to wait it out. They also did not entertain the idea of open combat with Alexander's battle hardened veterans, so they were therefore content to allow Alexander to initiate the opening maneuvers.

Alexander placed the majority of his cavalry and light infantrymen in a phalanx in front of Pelium and his heavy infantry in a phalanx of one hundred twenty men deep in the middle of the plain just beneath the enemy occupying the heights. He then began a series of difficult maneuvers and battle drills which only his soldiers could perform to impress the enemy. While the enemy were intently watching the phalanx first move one way, and then change about to face and imitate another charge, they were lulled into a sense of security.

After Alexander's deception plan of exercising various formations had continued for some time he ordered his phalanx into a wedge formation and charged the nearest enemy troops. They retreated from the hill immediately without a fight. Simultaneously, he dispatched the Companion cavalry and some light cavalry towards another group of enemy that were positioned overlooking

the only passable ford. The light cavalry had orders to dismount and fight as infantry once the hill had been gained to repulse any enemy counterattack. Alexander then replaced the cavalrymen with his Agrianian slingers and archers, about two thousand men, to hold the hill.

With some of the enemy dispersed and two key hilltops secured, Alexander began moving his hypaspists and heavy infantry across the river and form into a phalanx on the other side as quickly as possible. He also placed his siege equipment along the river bank to be used as artillery against any enemy troops that attacked his phalanx while crossing the river. "This is the first record of the use of artillery in battle" (Dodge 206).

Alexander also ordered up, on the double, his contingent of slingers and archers to provide additional cover by missile fire. They were only halfway across the river when Alexander ordered them to shoot against the enemy, when combined with his artillery, this was enough to keep the enemy at bay until the phalanx was formed. The entire operation was performed with minimal casualties to the light infantry and secured Alexander's line of communication back to Macedonia and a relatively secure encampment.

However, Clitus and Glaucias had perceived this operation as a retreat by Alexander and consequently let their guard down. This was immediately observed by Alexander's cavalry scouts, whom were constantly on the lookout, and reported that the enemy camp had no outposts or fortifications. That night, Alexander led his hypaspists, slingers, archers, and two brigades of heavy infantryman from his phalanx across the river and completely surprised the enemy asleep in their camp. The attack was so sudden and unexpected that the enemy was completely routed, with numerous killed or taken prisoner. Clitus and Glaucias escaped into the Taulantian Mountains but their armies were shattered. They sued for peace and Alexander once again secured his borders against any barbarian invasion from the northwest.

For the first time, detailed information is available about the staff organization of the Macedonian army. This may have been due to Alexander's innovation, but more likely than not, since he was so busy the first year as king, it is most likely a continuation of Philip's army that is being recorded for the first time under Alexander. Alexander's entire empire was run by the court that accompanied him wherever he was campaigning. There were approximately one hundred courtiers, called Personal Companions, who traveled with the court and fought beside Alexander in the Royal Squadron of the Companion Cavalry.

Alexander was attended at court by young adolescents, called Royal Pages, from the noble families of Macedonia. These Royal Pages were a guarantee that their families would remain loyal to Alexander while he was away campaigning. After receiving a general education in philosophy they could enter into the Companion Cavalry or be trained as officers within the Bodyguard (Sekunda 7). The Royal bodyguard consisted of seven officers, later changed to eight, each responsible for a small unit of Bodyguards who were responsible for guarding the king at all times. The Royal Bodyguards were the most senior officer positions in Alexander's Army and probably acted as teachers or training corps to the Bodyguards (Sekunda 9).

Alexander's entire administration was divided into various functions of Royal Secretariats, such as the Treasury and Army, all under the office of the Chief Secretary. The Royal Secretary of the Army was responsible for documenting all correspondence within the army, maintaining the muster rolls, and directing the allocation of reinforcements and material to the various units. The Army Secretariat was further subdivided into various functions or provinces, each controlled by a Secretary and assisted by Inspectors. The Secretary of Cavalry was responsible for the acquisition and distribution of horses that were lost in battle or on the campaign trail. Another secretary mentioned was the Secretary of Mercenaries for Egypt (Sekunda 12).

Even though the organization of Alexander's army was based on his father's design, Alexander appears to have made slight changes by delegating authority down to lower levels. We have no definite description of Philip's army during campaigns, such as exact strengths or positions of his individual units within the larger phalanx. Conversely, the names of sixty eight of Alexander's key officers, as well as numerous other minor officers, and the units that they commanded are listed in various accounts.

All that has been recorded of Philip's army only mentions either the left wing, right wing, or a cavalry unit that is usually under Philip, Alexander, or Parmenio's control. This may be due to the fact that there were very few qualified officers in Philip's army, the only real exception being Parmenio, who served both Philip and Alexander with competency. It is also possible that since Philip started out with such a small army he didn't necessarily require the additional commanders that Alexander would have required with his much larger army. Regardless of the situation, Alexander placed competent officers in charge of his tactical units, the Chiliarchia (Brigade) or more commonly referred to as the taxis, and was rewarded by the initiative they demonstrated. Following are sixty-eight officers mentioned by Dodge, author of Alexander, as being key leaders in Alexander's army (228-230).

1. Parmenio, general-in-chief, under the king, usually commanding the left wing of the army.
- 2-9. The Royal Bodyguard, specially trusted officers always near the king unless on special missions. They acted as general officers, chiefs of staff, or aides-de-camp.
 2. Hephaestion, son of Amyntas.
 3. Leonnatus, son of Antreas.
 4. Lysimachus, son of Agathocles.
 5. Perdikkas, son of Orontes, also commanded a brigade of pezetaeri.
 6. Aristonous, son of Pisaeus.
 7. Ptolemy, son of Lagus, succeeded Demetrius.
 8. Peithon, son of Crateas.
 9. Peucestas, later appointed in Carmania in 325 B.C.E.
10. Philotas, son of Parmenio, commanding the Companion Cavalry.
11. Nicanor, son of Parmenio, commanding the hypaspists.
12. Clitus, the black one, son of Dropidas, commanding the cavalry agema.

13. Glaucias, commanding a squadron of Companion cavalry.
14. Aristo, commanding a squadron of Companion cavalry.
15. Sopolis, commanding a squadron of Companion cavalry.
16. Heraclides, commanding a squadron of Companion cavalry.
17. Demetrius, commanding a squadron of Companion cavalry.
18. Meleager, commanding a squadron of Companion cavalry.
19. Hegelochus, commanding a squadron of Companion cavalry.
20. Coenus, son-in-law of Parmenio, commanding brigade of pezetaeri and later agema of cavalry.
21. Amyntas, son of Andromenes, commanding brigade of pezetaeri.
22. Meleager the second, commanding brigade of pezetaeri.
23. Philip, son of Amyntas, commanding brigade of pezetaeri.
24. Craterus, commanding brigade of pezetaeri.
25. Polysperchon succeeded Ptolemy and Craterus in command of brigade of pezetaeri.
26. Calas, son of Harpalus, commanding Thessalian heavy horse.
27. Philip the second, son of Menelaus, commanding Greek heavy horse.
28. Philip the third, son of Machatas, commanding brigade of infantry.
29. Sitalces, commanding Thracian acoutists.
30. Clearchus, commanding Macedonian and Cretan archers and later Greek auxiliaries.
31. Cleander succeeded Clearchus, commanding Macedonian and Cretan archers.
32. Antiochus succeeded Cleander, commanding Macedonian and Cretan archers.
33. Ombrion succeeded Antiochus, commanding Macedonian and Cretan archers.
34. Antiochus the second, commanding a brigade of infantry.
35. Attalus, commanding Agrianians, later an infantry brigade.
36. Admetus in temporary command of hypaspists at Tyre.
37. Amyntas the second, son of Arrhabaeus, commanding Macedonian lancers.
38. Amyntas the third, commanding infantry brigade.
39. Aristo, commanding Paeonian light horse.
40. Agatho, Parmenio's brother, commanding Odryssian light horse.
41. Antigonus, son of Philip, commanding Greek auxiliary phalangites.
42. Balacrus, son of Amyntas, vice Antigonus, commanding Greek auxiliary phalangites.
43. Balacrus, son of Nicanor, sometimes mentioned as a Royal Bodyguard.
44. Menandrus, son of Nicanor, commanding Greek mercenary phalangites.
45. Seleucus, in command of Royal Pages.
46. Ptolemy the second, son of Seleucus, commanding infantry brigade.
47. Sitalces, commanding Thracians.
48. Ptolemy the third, son of Philip, temporarily commanding a squadron of Companion cavalry.
49. Philotas, commanding an infantry brigade.
50. Calanus succeeded Balacrus in command of Greek auxiliaries.
51. Alceatas, commanding an infantry brigade.
52. Ptolemy the fourth, commanding an infantry brigade.
53. Gorgias, commanding an infantry brigade.
54. Aristobulus, a minor officer, who wrote a history of Alexander.
55. Clitus, the white one, commanding an infantry brigade.
56. Peithon the second, son of Sosocles, an infantry officer.
57. Peithon the third, son of Agenor, commanding an infantry brigade.

58. Neoptolemus, commanding an infantry brigade.
59. Antigenes, commanding an infantry brigade.
60. Cassander, commanding an infantry brigade.
61. Alexander, son of Aeropus, commanding Thessalian horse, vice Calas.
62. Erigyius, commanding Greek allied cavalry.
63. Simmias, commanding an infantry brigade.
64. Artabazus, commanding Darius' Greek mercenaries, later with Alexander.
65. Nearchus, an infantry officer and later the distinguished admiral.
66. Eumenes, the secretary.
67. Diades, the engineer.
68. Laomedon, provost marshal.

During his first year of reign, Alexander's time was basically occupied in establishing control of his borders. However, he still managed to implement a few key tactical improvements to the Macedonian army which had impact on his entire career of campaigns. The first and most noticeable change was the flexibility of his formations on the battlefield. Previous commanders most always structured their armies the same way, with a phalanx on the left wing commanded by a subordinate to fix the enemy, and the phalanx on the right wing commanded by the King or senior general to act as the shock force. This is similar to the hammer and anvil concept of the modern army. What few light troops were available after skirmishing out front, were placed on the left flank, while the cavalry was placed on the right wing, this being the highest place of honor. Alexander did not allow tradition to control his tactics, he placed his troops accordingly to the disposition of the terrain. He has occasionally moved the hypaspist to the left flank or formed the skirmishers into battle lines for more force protection or to extend his front instead of holding supporting roles.

Another change that Alexander made to doctrine was to place himself wherever the situation required, whether with the right, center, or left wing. If Alexander moved, he rarely took the companion cavalry with him but instead took command of the troops near his position. In some battles the Royal Squadron (Agema) did accompany Alexander to wherever he moved, and in other battles, he attached the agema to whichever commander was the main effort. Alexander was able

to do this because he had trust and confidence in his subordinate leaders and with the quality of his troops. It was also a necessity because he was usually outnumbered and could be easily outflanked by the enemy, a situation that would continue throughout the rest of his career.

The last few changes that Alexander made to his Army include; introducing stave-fighting into the soldiers training, replacing the Phrygian style helmet with the Boeotian helmet for his cavalry, and ordering all of his soldiers to shave in order to eliminate a potential handhold during hand-to-hand fighting (Sekunda 5).

While Alexander was away suppressing revolts along his northern frontier, Thebes was inciting other Greek cities to overthrow the Macedonian monarchy and reinstate their original rulers. This movement was started by a few Theban exiles whom were living in Athens at the time Alexander was in Illyria. They had heard, or simply started the rumor, that Alexander had recently been killed in battle, that his troops were destroyed by the barbarians, and now was the time to act to overthrow Macedonian rule. Alexander had actually been wounded in Illyria but survived his wounds and lived to hear of this rumor while he was still in Illyria. He immediately began marching his soldiers south towards Thebes and covered three hundred miles in thirteen days.

Thebes had previously been conquered by Alexander's father after the battle of Chaeronea and thereafter remained under Macedonian rule. To help secure his authority over Thebes, Philip had stationed soldiers in the Cadmaea (citadel) within the city. The exiled Thebans sneaked back into the city, killed two Macedonian officers, and convinced the city assembly to revolt. They were also assured assistance from the surrounding cities which were to begin other similar uprisings. The Macedonian garrison in Thebes was surrounded and blockaded within the citadel while the Thebans also fortified their exterior walls around the city to prevent any relief force from rescuing the garrison.

Alexander's forced march from Illyria caught the Thebans and its allies completely by surprise when he unexpectedly showed up outside the city gates of Thebes with thirty thousand infantry and three thousand cavalry. His sudden appearance caused Athens and the other allies to back away from their pledge of support to Thebes and await the outcome. As his father before him, Alexander attempted to peacefully put an end to the rebellion. His only demand of the rebels was that they hand over the two leaders of the rebellion, Phoenix and Prothytes. The majority of the Thebans wanted to accept the terms but the city assembly in power refused, partly in fear for their lives. The Thebans began the conflict by attacking Alexander's outposts and camp with light infantry and cavalry, which was close to being overrun until the expeditious arrival of Alexander's heavy infantry and archers.

The battle began for the Macedonians when Perdiccas, commander of the first brigade, saw an opening in the Theban line and attacked. He successfully breached the exterior wall and continued forward with his attack into the Theban siege lines. When Perdiccas attacked, Amyntas, the next brigade in the battle line also attacked. When Alexander saw their initial success, he sent forward his entire force of light infantry to support the main effort created by the two brigades. His hypaspists were held toward the rear as a reserve, while Alexander waited on line with the rest of the brigades.

The initial assault went as far forward to the temple of Hercules before the Thebans were able to rally and counterattack. The Thebans were having success in driving out the two brigades of Perdiccas and Amyntas, when Alexander attacked with his remaining phalanx and pushed the Thebans back into the city, followed closely on their heels by Alexander. Simultaneously, the Macedonian garrison barricaded behind the citadel also made a breakout and attacked towards the temple of Amphion, directly into the flank and rear of the Thebans.

The combination of these two assaults proved too much for the Thebans and their cavalry fled the city while the infantry was left to make their own escape. Six thousand Thebans were slain and thirty thousand sold as slaves and the entire city burned to the ground. Alexander let the fate of Thebes be decided by his allies who had been oppressed by Thebes for years. It has been written by Curtius that the majority of Thebans were slain by Alexander's allies and that the Macedonians did not participate in the slaughter (Dodge 215).

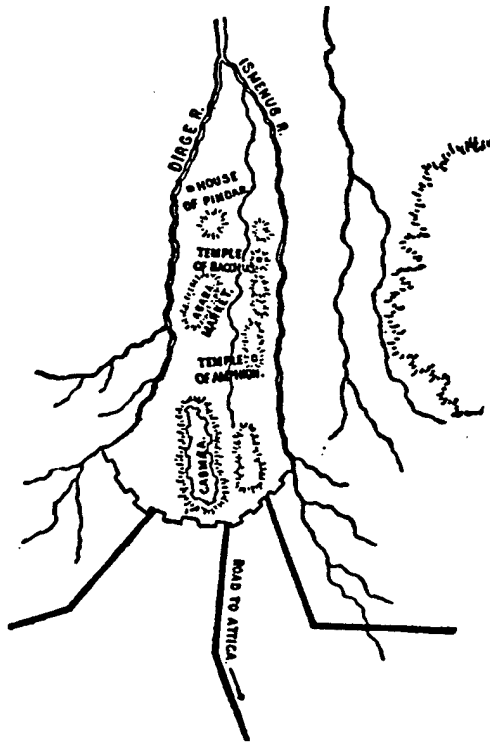


Fig. 3. Map of the city of Thebes. Reprinted from Theodore A. Dodge, Alexander (London: Greenhill Books, 1994), 213.

When the Theban allies heard of the slaughter, they immediately sent emissaries asking for forgiveness and seeking alliance with Alexander. He accepted all pleas for mercy and only requested that the nine Athenian leaders responsible for the revolt, including Demosthenes, be

turned over to him. Alexander honored the Athenian pleas for leniency and downgraded his demand that only Charidemus be exiled. Athens readily accepted the conditions and Charidemus left the country and went to work for King Darius in Persia.

Having settled the affairs within his kingdom against the barbarians to the north and his Greek-allies to the south, Alexander could finally begin his preparation for war against Persia. He had accomplished everything to date while having only one year as the young King of Macedonia. He still had weeks of preparation ahead in organizing his army for the upcoming campaigns, but his lifelong goal was about to begin.

In his first battle against the Thracians, Alexander demonstrated his first start towards combined arms warfare with the coordinated action between the skirmishers and the light infantry. In subsequent actions against the Triballians he used the skirmishers in conjunction with the cavalry and heavy infantry. This was a deliberate plan and not some chance maneuver because he specifically directed the heavy infantry to remain in column to retain their speed for supporting the skirmishers. Against the Illyrians and Taulantians, Alexander utilized his siege equipment, assisted by skirmishers, against enemy troops to establish a beachhead for his soldiers crossing the river.

CHAPTER 3

THE CAMPAIGN IN ASIA MINOR

Finally all his plans were completed, and in the spring of 334 Alexander moved out of Pella upon the beginning of the long journey which was to carry him to what the Greeks visioned as the ends of the world, a journey from which he was never to return. A twenty-one-year-old king, godlike in his physical beauty, and even now convinced that he was the son of Zeus-Ammon, with the last words of Olympias in his ears reminding him of his divine birth. He marched to Amphipolis, inspected his newly gathered fleet harbored on Lake Cercinitis, gave them orders to sail at once to the Propontus, and marched away on the most ambitious project ever undertaken by any man, before or since. He passed Phagres and Pergamum . . . and arrived at Sestos in the Chersonese after covering three hundred and fifty miles in twenty days. Here where the Hellespont is narrowest (about three quarters of a mile) Xerxes had built his famous double bridge of boats and crossed, nearly a century and a half before -- had nightly swum the strait to his rendezvous with Hero, priestess of Aphrodite. And here, too, Alexander proposed to cross his army (Cummings 120).

In early April 334 B.C.E., Alexander successfully crossed the Hellespont in whatever vessels were available to him and began his conquest of Persia. Alexander's field army consisted of thirty thousand infantry, five thousand one hundred cavalry, and about one hundred sixty triremes and he could expect to be joined by the Macedonian soldiers his father had sent over earlier. Additionally, Alexander had left one of his more able commanders, Antipater, with twelve thousand infantry and fifteen hundred cavalry back in Greece to safeguard his empire and base of supply. Alexander's first objective was to free the Greek cities of Asia and secure the Mediterranean seaboard before moving inland. His first obstacle to overcome was a Persian army commanded by Spithridates and assisted by Memnon the Rhodian, who was a favorite mercenary of King Darius III. Darius had left the governors or Satraps of each province the responsibility to defeat Alexander since he was far to the east in his capital at Susa.

Spithridates could have seriously delayed Alexander crossing the Hellespont, however he was too slow to organize an immediate defense against Alexander. As it turned out, Spithridates and his forces set up a defense along the east bank of the River Granicus to stop Alexander from

traveling any further east. Although Alexander's objectives were the Greek cities along the southern seaboard, he could not allow that large of a force to remain in his rear and threaten his supply lines. Alexander therefore immediately marched for the River Granicus in a semi-deployment or double phalanx.

This tactical march formation was useful in defending against surprise attacks. The phalanx marched in two parallel lines that could quickly form into a square if suddenly attacked on any flank. Cavalry provided screening protection along the flanks and the scouts and skirmishers were placed out front as a reconnaissance and screening force (Warry Alexander 18). Once his army reached the objective or came near the enemy, Alexander would order his heavy infantry to form back up into the single line phalanx.

Upon arriving at Granicus, Alexander refused to listen to Parmenio, who advised that they wait to attack until early the next morning, hoping to catch the Persians in a pre-dawn surprise attack. By this time, Alexander had linked up with the forces previously sent over by Philip, bringing his total infantry to forty thousand. Alexander had two reasons why he probably did not want to wait any longer than necessary. First, he had noticed that the Persians were defending the steep banks of the River Granicus with their cavalry when it would have been much better to use the heavy infantry instead. Alexander did not want to give Spithridates the opportunity to change his formations.

Secondly, Alexander wanted an immediate moral victory for his soldiers before their upcoming campaigns. Therefore, Alexander took seven squadrons of Companion Cavalry along with all of the archers and other skirmishers, he went to a different crossing site further down stream, screened the entire time by the topography beside the river. Alexander was attempting to outflank the Persian army while his main force kept the Persians occupied. Socrates, leading one squadron of Companion Cavalry, the Paeonian cavalry, and one brigade of hypaspists, led the main

attack on the primary fording site. The remaining hypaspists, heavy infantry and allied cavalry remained in a defensive position along the west bank of River Granicus.

The Persian army was arrayed in two parallel battle lines, with approximately ten thousand cavalry posted next to the river's edge, and an undetermined number of heavy infantry placed a little further back on a slight rise. Arrian gives no order of battle for the Persian order of battle, but various figures are given by other accounts. What is agreed upon is that Memnon had around twenty thousand Greek mercenary heavy infantry. The numbers for the Persian infantry vary between historians from a few thousand to over one hundred thousand soldiers. Whatever the case, Alexander had assessed the situation correctly by identifying the main threat as the Persian cavalry and the Greek mercenaries. If he could defeat the cavalry threat before committing to the Greek mercenary force, he would be able to deal with the Persian infantry as the situation allowed.

In his first battle overseas, Alexander made his first of many changes to Greek tactics. Instead of striking first with the cavalry, Alexander committed his infantry forces and cavalry squadrons under Socrates first. This gave Alexander the time he needed to cross further downstream unknown and unopposed. The Persians were completely surprised at finding Alexander on their side of the river and attacking their left flank. As the Persians pulled more cavalry along their front line to meet the new threat from their flank, the Macedonian phalanx who up to now had remained stationary, fought their way across the river and established a secure bridgehead among the Persian cavalry.

As the battle developed, the fighting became fierce hand-to-hand combat for which Alexander's more heavily equipped soldiers were better trained. Alexander himself was caught up in the savage fighting, first killing Mithridates, the son-in-law of Darius, then Rhesaces, the brother of Spithridates. Alexander was saved from a fatal blow delivered by Spithridates when Clitus expeditiously arrived and hacked off Spithridates' shoulder (Warry Alexander 24).

With the senior leaders killed and the entire Macedonian army fighting them, the remaining Persian cavalry beat a hasty retreat. Alexander had changed another standard Greek tactic by dispersing his archers and javelin-men among his Companion Cavalry instead of fighting as a separate unit. They inflicted heavy casualties on the Persian cavalry who were shot from their saddles at close range as they were engaging Alexander's cavalry. Instead of pursuing the Persian cavalry, Alexander concentrated all of his forces against the Greek mercenaries fighting for Darius. After completely surrounding them, Alexander was able to destroy them entirely. According to Arrian, only those who hid among the dead were able to escape, Memnon included (Cummings 130). Alexander killed at least nineteen thousand and captured two thousand of the Greek mercenaries, who were sent back to Greece in chains to be sold as slaves or work in his mines. Alexander was now free to move south and free the Greek cities still under Persian control.

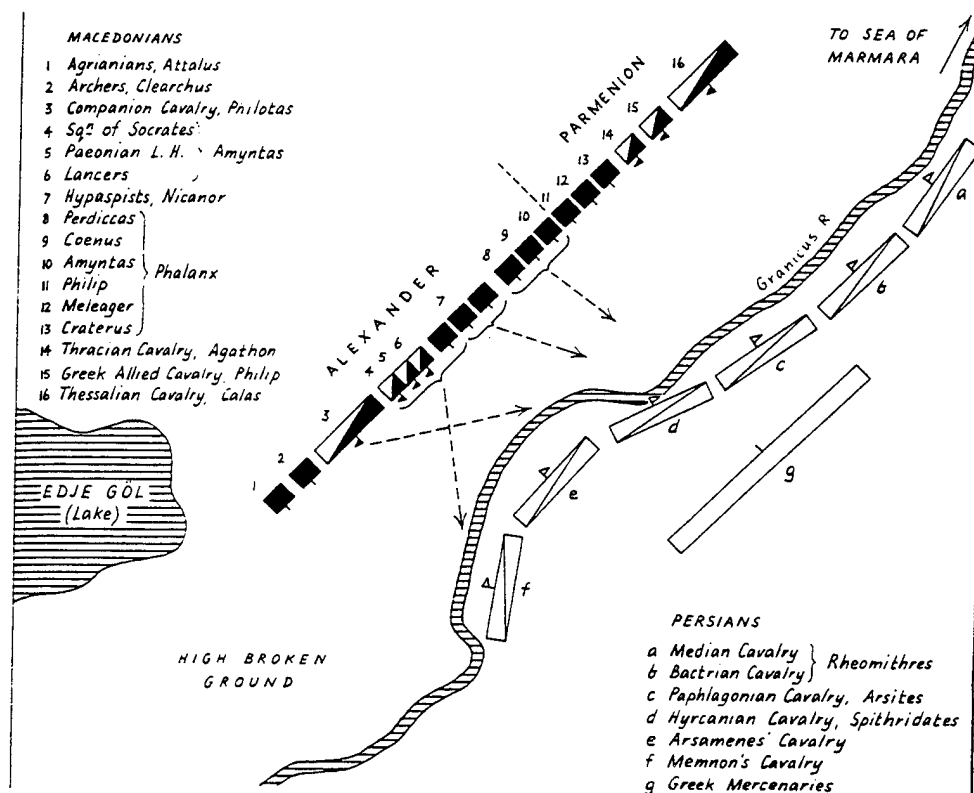


Fig. 4. Map of Battle of Granicus. Reprinted from J. F. C. Fuller, The Generalship of Alexander the Great (New Brunswick: Rutgers University Press, 1960), 151.

News of Alexander's latest victory traveled fast along the Mediterranean seaboard. City after city opened their gates to him and accepted Alexander as their rightful ruler. Alexander's strategy at this point was to deny the Persian fleet any ports from which they could replenish their supplies. He knew he had to defeat the Persian fleet in order to secure his own power in Greece and his supply line on the water. Alexander did not wish to engage the more powerful Persian fleet with his much smaller and less trustworthy fleet. By capturing the port cities and leaving them garrisoned with his own soldiers, Alexander knew he could win the naval battle on land. Alexander also remembered the importance of recruiting soldiers from his defeated enemies and did not enslave any more Persian mercenaries as he had at Granicus.

Some cities however, did not see the benefit of throwing off the Persian yoke of rule and accepting a new leader to whom they still had to pay taxes. At the city of Miletus, Alexander used his triremes to blockade the city from receiving any reinforcements from the Persian fleet that was anchored offshore. Parmenio argued that their fleet should do battle with the Persian fleet, a recommendation that Alexander strongly opposed (Green 189). Severed from any assistance, Miletus was soon captured after the Macedonian army was able to breach the city walls.

Alexander's old nemesis, Memnon the Rhodian, had been made supreme commander in all of lower Asia by Darius and continued to be a problem to Alexander. After Granicus, Memnon had taken refuge in Halicarnassus and used that city as a base for his army. Alexander, using different methods of siegecraft such as filling in moats, undermining walls and towers, and using rams and catapults, eventually broke through the city's defenses. Memnon and his army quickly retired to two citadels within the city for a last stand. Alexander however, had no desire to spend any more time on the enemy. Instead, he left three thousand infantry and two hundred cavalry to encircle the citadels and starve them out while he continued campaigning. The citadels eventually submitted to the Macedonians, but not before Memnon escaped again, moving his base of

operations to the city of Chios on the island of Cos. Alexander then marched on and secured the cities of Tralles, Alinda, and Caria.

At this point, sometime in the fall of 334 B.C.E., Alexander decided to secure his own position after nearly six months of hard campaigning. He faced no immediate threat from a Persian army, only the danger from the tribes scattered throughout the hills disrupting his advance or the city dwellers found along the coast that provided the Persian fleet with naval bases. Alexander divided his forces, keeping the Macedonians with himself, and giving Parmenio command of the Allies to march inland and secure the local tribes (Keegan 25). Additionally, some of his soldiers were allowed to return home on leave while other officers were sent off to recruit more soldiers. Alexander sent everyone their separate ways with orders to link up later on at the city of Gordium. He also disbanded his fleet and sent it to various parts of Greece. He still had reasons to distrust the Athenians and other Greek cities and realized that only the presence of a strong fleet would dissuade them from open rebellion.

Alexander then marched on Caunus, which turned out to be too heavily fortified and left instructions with the forces at Halicarnassus to lay a similar siege here when they were finished. During the following winter, Alexander marched north to Gordium, subduing several more cities along the way, to meet up with Parmenio and the soldiers he had sent out earlier on leave and recruiting missions.

At Gordium, Alexander received nearly three thousand infantry and three hundred cavalry from Macedonia, two hundred Thessalian cavalry, and one hundred fifty Peloponnesian mercenaries. He also received word that Halicarnassus and Caunus were now garrisoned by his soldiers after both cities capitulated to long sieges. During Alexander's first year of campaigning overseas, he had defeated or destroyed twenty six cities specifically mentioned by Arrian, received peace envoys from several tribes, and had accepted the submission of over thirty other cities

(Cummings 145). By default of any opposition on land and the coasts free of the Persian fleet, Alexander had become master of Asia Minor. Things were about to change however, for sometime during that winter Memnon had died and Darius now felt that he must personally lead his army against Alexander.



Fig. 5. Map of Asia Minor. Reprinted from J. F. C. Fuller, *The Generalship of Alexander the Great* (New Brunswick: Rutgers University Press, 1960), 91.

The details of the organization of Alexander's army at this time is difficult to depict.

Sources that give precise numbers in losses for Alexander are rare and even nonexistent for the

numerous side expeditions undertaken by Parmenio and other officers. What is known is that there were battles with casualties, several cities were garrisoned with Macedonian soldiers, and there were most certainly losses to disease, infections and desertions. With no additional reinforcements other than the ones already accounted for, this would leave Alexander's army several thousand less than the figures given at Granicus (Cummings 157).

Several historians have suggested that while Alexander was consolidating his forces at Gordium, he had to make the decision whether to proceed east against Darius or remain along the Mediterranean coast to secure his base. They further suggest that Alexander received an omen, in the form of the Gordian knot, directing him against Darius. The Gordian knot was a tightly woven sailor's knot made of tough cornel bark connecting an ox cart to its yoke. The knot was located in the ancient palace of King Midas in the acropolis above the city of Gordium. According to the legend, the man who could undo the knot would be ruler of all Asia. After struggling with the knot for a short while, Alexander drew his sword and severed the knot, exclaiming to everyone that it does not matter how he loosened it. This omen had the desired impact on his superstitious troops to continue campaigning against Darius.

By July, Alexander began receiving reports that Darius had moved from his capital at Susa to Babylon and began gathering a mighty army numbering in the hundreds of thousands. Alexander made the decision to occupy the region of Cilicia, which was the junction between the eastern and southern coasts of the Mediterranean Sea. On his march south he passed through Paphlagonia and Cappadocia, receiving the surrender both and installed his own satraps for rulers. When he reached the Cilician Gates, Alexander discovered that they were already securely held by Darius' forces. Alexander placed Parmenio in command of the heavy infantry, while he took command of the hypaspists, archers, and Agrianes and conducted a night march, hoping to catch

the guards by surprise. Fortunately, the Persian guards had observed that Alexander was personally leading the assault and fled from their posts (Arrian {R} I:135).

There were now two narrow mountain passes from which Darius could approach Cilicia, the Amanic Gates and the Syrian Gates. Parmenio had been sent ahead with a force to capture and occupy the city of Issus, from which he could watch both passes. For the first time in his career, Alexander underestimated his opponent and moved his army through Issus to the southern most Syrian Gates, expecting Darius to come through there (Maihafer 65). Darius had indeed selected a battlefield on a large plain favorable to his large force of cavalry just south of the Syrian Gates. However, due to Alexander's delays in subduing the Cilician hillmen and Darius' own advisors, Darius elected to leave that battlefield and take the offensive against Alexander. Therefore, Darius passed through the northern Amanic Gates, seized Issus, and positioned his army directly across Alexander's supply line to Greece. In seizing Issus, Darius also captured Alexander's sick and wounded men left behind in Issus, first cutting off their hands and then killing them.

While Alexander was forced to counter-march seventy miles back north to engage the Persians, Darius began fortifying his position along the north bank of the Pinarus River. Darius made a strategic error because the site he had selected was too narrow to deploy all of his superior numbers against Alexander, however, his battle line was protected on the west by the Gulf of Issus and on the east by the Amanus Mountains. Darius deployed his forces accordingly: thirty thousand cavalry and twenty thousand light infantry were sent across the river as skirmishers; thirty thousand heavy Greek mercenaries were positioned in the center of his line; thirty thousand heavy cardaces were placed on either side of the Greek mercenaries; and twenty thousand cardaces were placed in the foothills on their extreme left. This was the maximum number of soldiers capable of forming on line in the mile and a half wide plain. The remaining light and heavy troops were positioned by their territory behind the main battle line. According to Arrian and Plutarch,

Darius' army at this time numbered six hundred thousand. Diodorus and Justin state that he had only four hundred thousand soldiers (Arrian {S} 115). Additionally, in the center of the line was the Royal Bodyguard, two thousand hand-picked troops, protecting their Great King stationed in an imposing ornamental chariot (Maihafer 67).

Meanwhile, Alexander continued his forced night march towards Darius. As his soldiers passed through the narrows in column, he began deploying his units into a battle phalanx extending from the sea to the mountains. Alexander's initial order of battle for his main battle line from right to left was: Companion Cavalry and Thessalian cavalry; Nicanor, son of Parmenio in charge of the hypaspists; Coenus' battalion; Perdikkas battalion; Craterus battalion; Meleager's battalion; Ptolemy's battalion; Amyntas' battalion; Greek Allies battalion; and Peloponnesian and other Greek allied cavalry on the far left wing. Cretan archers and Thracian javelin-men were out front on the left wing. Macedonian archers and the Agrianians were out front on the right wing along with the Paeonian and lancer cavalry. The foreign mercenaries were distributed amongst all the battalions and the Greek mercenaries were held in reserve.

After slowly moving forward and seeing that the Persians still overlapped his line, Alexander sent a detachment of skirmishers and cavalry to oppose the threat by the cardaces to his right wing. Recognizing that he could not fight the battle if concerned about being enveloped, he sent the skirmishers forward to chase away the cardaces. After the Cardaces retreated, Alexander pulled two Companion Cavalry squadrons from Anthemus and had them move into the position just vacated by the Cardaces. This went unobserved by the Persians because the squadrons moved behind the Macedonian battle line.

Meanwhile, the Persian skirmish line withdrew as Alexander closed in, with the Persian cavalry taking up positions next to the sea and the infantry dispersing into the rear formations. Alexander decided that the sea side would be the main effort for Darius, so he sent the Thessalian

cavalry to the left wing with instructions to Parmenio not to lose contact with the sea. They also went unobserved from the Persians by going behind the phalanx. Alexander then sent the archers, Agrianians, and some Greek mercenaries forward towards the river so that they now outflanked Darius' left wing.

Both armies right wings were now the strongest of their forces, so that they each were attacking their opponents weaker left wing. Alexander opened the battle in a slow, steady oblique movement with his phalanx, hypaspists, Companion Cavalry, light cavalry, and the skirmishers from the right wing. When his lead troops came within enemy missile range, Alexander gave the signal for a double-time march. His soldiers all shouted as one when they began their charge and quickly came to close combat with the Persians. The heavy shock troops that Alexander personally led quickly overcame their opponents.

As Alexander cleared the Persians from the area to his front, he wheeled left to charge into the left flank of the Persian's center phalanx. Accompanying him were the hypaspists and two battalions of his phalanx that had made it over the river. The Companion Cavalry and lighter troops continued their forward attack to further secure his hold on the opposite shore. The remaining battalions of his phalanx were meeting stiff resistance from the Greek mercenaries in Darius' center and had not been able to cross the river.

Alexander then used his archers and Agrianians to protect his rear and right flank from the unused Persian forces still massed along the river to his right as he charged Darius' center. As he came into contact with the Greek mercenaries, this took pressure off his remaining phalanx, who were able to secure footing on the other side of the river and challenge the Persian phalanx on two fronts. Seeing that the situation was now controlled, Alexander took command of his Companion Cavalry and led them straight for Darius himself, knowing that to defeat him would also defeat his army. Seeing Alexander fighting his way towards him, Darius made a hasty retreat, pausing long

enough only to switch into a faster chariot and eventually onto horseback when the terrain became to rough.

At the same time, the heavy Persian cavalry had easily crossed the river and was brutally assaulting the outnumbered Thessalian cavalry formation. Only by Parmenio's leadership was the Macedonian left wing able to hold together as a unit and not lose contact with the sea. After each Persian assault, which succeeded in pushing the Thessalians further and further back, Parmenio would counterattack with a charge of his own cavalry and disrupt the Persians from exploiting their initial successes. When the Persian cavalry heard that Darius had fled the battlefield, they also broke and hastily retreated, running over their own infantry in their desire to escape.

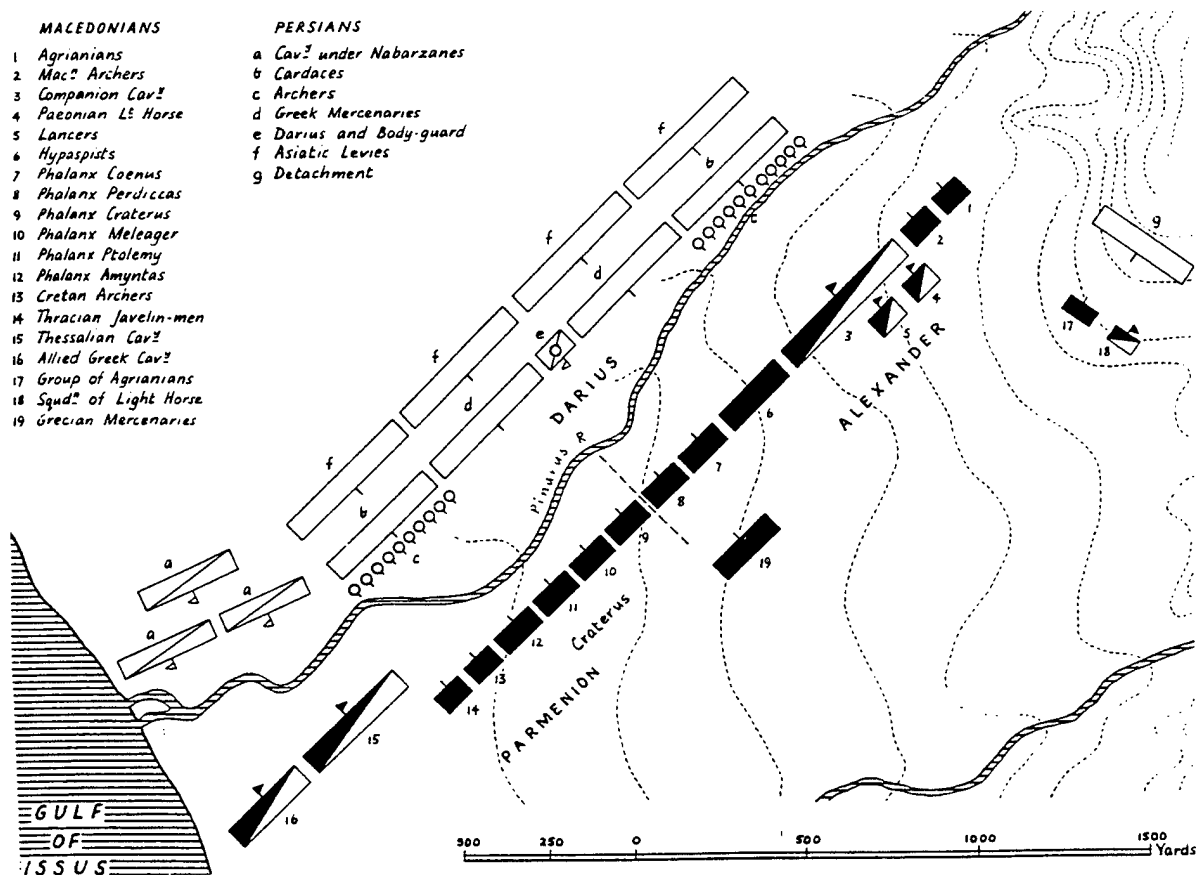


Fig. 6. Map of Battle of Issus. Reprinted from J. F. C. Fuller, *The Generalship of Alexander the Great* (New Brunswick: Rutgers University Press, 1960), 158.

Alexander had won his second major victory against the Persian army with only four hundred and fifty infantry and cavalry killed, compared to the Persian losses of one hundred thousand infantry and ten thousand cavalry (Fuller 162). While these figures may be exaggerated, all of the historians accounts list Persian numbers killed many times higher than Alexander's. An additional eight thousand Greek mercenaries escaped and sailed to Egypt and four thousand Greek mercenaries linked up with Darius near Thapsacus, on the other side of the Euphrates River. The remaining army of Darius simply slipped away during the night and returned to their homes or caught up with Darius in small groups. Alexander did not pursue Darius, but instead worked towards his strategic goal to defeat the Persian navy on land by continuing to secure the southern coastline of the Mediterranean. It would be another twenty three months before Alexander and Darius were to meet again.

An analysis of Alexander's battles in Asia Minor indicate further evolution towards combined arms warfare. At the battle on the River Granicus, Alexander split his army into three forces comprised of a main effort, a supporting effort, and a follow-on force. In each one of the three forces there were at least two, if not three, different arms working together. During the course of the battle, all three forces came together in an attack against Darius' Greek infantry. In the force led by Alexander, the skirmishers were actually interspersed among his heavy cavalry. This proved to be a very deadly combination for the Persian cavalry and another new tactical development by Alexander. At the Battle of Issus, heavy cavalry, light infantry, hypaspists, and heavy infantry all fought as one against Darius' left wing. After defeating the left wing, the heavy cavalry and light infantry worked together to secure the far shore while Alexander led the hypaspists and two battalions of the heavy infantry against the flank of the Persian center. This is a good example of various combat arms working together to defeat a larger enemy.

CHAPTER 4

THE CAMPAIGN IN EASTERN PERSIA

Friends and fellow soldiers, I do not see how we can safely advance upon Egypt, as long as Persia controls the sea; and to pursue Darius with the neutral city of Tyre in our rear and Egypt and Cyprus still in enemy hands could be a serious risk, especially in view of the situation in Greece. With our army on the track of Darius, far inland in the direction of Babylon, the Persians might well regain control of the coast, and thus be enabled with more power behind them to transfer the war to Greece, where Sparta is already openly hostile to us, and Athens, at the moment, is but an unwilling ally; fear, not friendliness, keeping her on our side. But with Tyre destroyed, all Phoenicia would be ours, and the Phoenician fleet, which both in numbers and quality is the predominant element in the sea-power of Persia, would very likely come over to us. The Phoenician seamen, ships' crews or fighting men, once their towns are in our hands, will hardly endure to face the perils of service at sea for the sake of others. The next step will be Cyprus . . . and finally, with Egypt in our hands we shall have no further cause for uneasiness about Greece: we shall be able to march on Babylon with security at home, with enhanced prestige, and with Persia excluded not only from the sea, but from the whole continent up to the Euphrates (Arrian {S} 131).

After the Battle of Issus, Alexander gave the above speech to his Companions and senior commanders, not so much as to ask for their advice, but rather to inform them of his decision to assault the city of Tyre. Immediately after taking care of his wounded soldiers and his own wounds, Alexander marched towards Phoenicia, leaving behind Menon, son of Kerdimmas, as governor of Lowland Syria and Balacrus as governor of Cilicia. Alexander left Menon with the allied cavalry to help keep the surrounding countryside under control. Along the way, various prince's and rulers of islands and surrounding territories surrendered their cities to Alexander without a fight. In fact, most of them were glad to be out from underneath Persian rule. It was on his way towards Tyre that he met his first resistance. Representatives from the city came forward to welcome Alexander and follow whatever instructions he should give them. Alexander informed them that he wanted to offer sacrifice at the temple of Heracles. The Tyrians refused his request on the grounds that it was sacrilegious if any Macedonian or Persian entered their town. It was probably due more to the fact that the Tyrians did not want to jeopardize their neutrality in the

current war. It seemed more prudent that they should wait to see who would be the victor (Arrian {S} 131). This response infuriated Alexander and he began immediate preparations to lay siege to Tyre.

The city of Tyre was positioned on a small island about one half mile from the mainland, fortified with strong walls that came up to the edge of the sea. The only entrance was through two harbors closely guarded by the Tyrian fleet. Alexander began construction of a two hundred foot wide mole at the narrowest portion of the channel, using stones and timber tightly packed with mud (Arrian {S} 133). During the siege process, there were several preventive measures and counter-measures taken by both sides. Alexander built siege towers and war-engines at the ends of his mole to provide counter-fire against the raids made by the Tyrian fleet. However, the Tyrians destroyed the towers with a cattle-boat filled with pitch that was ignited and set adrift after the winds were blowing in the right direction. Alexander then left instructions to begin widening the mole so that it could hold more towers and war-engines while he left with the hypaspists to collect some warships of his own.

After returning with his own fleet, Alexander attempted to use his navy to blockade the Tyrian fleet from having free access in and out of the harbors, but the Tyrians used fire arrows with great success to sink his ships. Also hampering Alexander from getting in close to the harbors were large stones that the Tyrians had catapulted into the shallow waters. Alexander began the slow process of removing them with some of his ships while others were used as floating platforms for his field artillery and siege equipment. The Tyrians effectively used ships with specially fitted armored bows to cut the anchor lines until Alexander also fitted some of his own ships with armor to block the Tyrian attacks. The Tyrians countered this measure by sending divers underwater to cut the anchor ropes of the ships at bay until Alexander began using large chains on his anchors.

Once the large rocks were cleared from the water, Alexander was able to maneuver his ships and block the harbors, thus preventing the Tyrian fleet from making any more attacks on the mole. Within a few days, the construction of the mole was completed and Alexander launched a coordinated attack from the sea and land. With a combination of war-machines mounted on ships and the mole, and several other ships loaded with as many of the hypaspists as they could carry, Alexander was able to make a breach in the cities defenses and successfully force his way into the city. After more than seven months of laying siege to Tyre, Alexander completely destroyed the city, killing eight thousand Tyrians and selling the remaining thirty thousand into slavery with only incurring four hundred losses to his own troops.

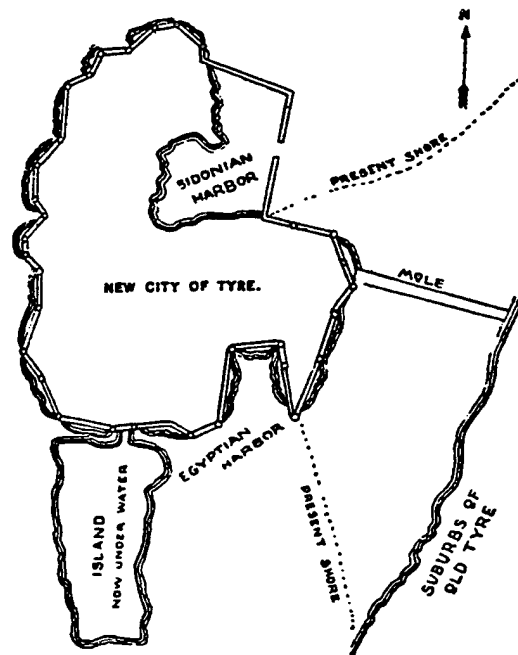


Fig. 7. Map of Tyre. Reprinted from Theodore A. Dodge, Alexander (London: Greenhill Books, 1994), 329.

The only city remaining in Phoenicia that did not surrender to Alexander was Gaza. This was also a heavily fortified fort that stood two and one half miles from the Mediterranean sea on a

high mound, and was the southern most city in Phoenicia. Alexander's engineers correctly pointed out that his siege engines would not be effective against the walls of the city because the walls were so high up. He then ordered a counter-mound with ramps to be built around the city from which he could place his siege equipment and battering rams effectively. The ramps were said to be two hundred and fifty feet high or equal to the height of the walls. In additional key locations, Alexander directed that the city walls also be under-mined to cause them to collapse and create more breaches for his men to enter through (Fuller 216). After two months of work, Alexander's army forced their way into Gaza and killed all ten thousand of the enemy defenders and enslaved the women and children. He did not destroy Gaza as he had at Tyre, instead, Alexander allowed the surrounding populace to inhabit the city under his rule.

With the capitulation of Gaza, the road was now open to Egypt, which was the most southwestern province of the Persian empire. He was openly welcomed into Egypt without any fighting and quickly garrisoned the Egyptian cities of Pelusium and Memphis with Macedonian troops. He also sailed down the Nile river where he came upon a site so well situated that he immediately ordered the construction of a new city that would be called Alexandria. While he wintered over in Egypt, Alexander received four hundred Greek mercenaries and five hundred Thracian cavalry replacements sent over by Antipater. He also made several key promotions to replace the leaders that were killed in previous battles or had been left behind as governors and garrison commanders in conquered territory.

Alexander made few, if any, changes to his organization other than replacing wounded and killed commanders with junior officers. It can also be assumed that he withdrew some of his forces from garrisons he had previously left to guard his supply lines and recruited other soldiers from his conquered territories because his army at Gaugamela would be the largest force he commanded to date (Dodge 354).

As soon as spring arrived Alexander departed Egypt for what he hoped would be the final confrontation with Darius. He traveled northeast through Tyre, then east through Mesopotamia always keeping the Armenian mountains to his left until he arrived at the city of Thapsacus on the Euphrates. Both Alexander and Darius recognized the value of the cities of Babylon and Arbela as the gateways to the Persian empire and made their individual plans accordingly. Alexander could either travel south down the Euphrates river to Babylon or cross northern Mesopotamia and then travel south along the Tigris river to Arbela. Darius first positioned his troops on the plains north of Babylon, assuming since this was the easiest route that it would also be Alexander's first choice. He also laid waste to the countryside on both sides of the Euphrates, hoping to slow Alexander's army march rate. Alexander however, choose the least likely route, which was to cross Mesopotamia and travel south along the east bank of the Tigris river (Livesey 10). Additionally, Alexander had most likely read Xenophon's Anabasis (March of the Ten Thousand) and knew the southern route was hot, arid, and provided little forage along the route. This was not the most direct route, but one that provided surprise and the flexibility to attack either Arbela or Babylon.

Along the way, Alexander captured many of Darius' scouts who falsely reported that Darius had taken up a defensive position on the far side of the Tigris river nearest Arbela. He had no desire to attempt a river-crossing against so large an army and in such dangerous waters so Alexander traveled further north where he could conduct an unopposed crossing. Once reaching the Tigris however, Alexander found it deserted of all Persians. Therefore, he decided to cross the fast-moving river at this place while he was unopposed. After placing a line of cavalry in the river both upstream and downstream from the ford site, one to slow the water and the other to catch men swept away, Alexander dismounted and personally led his infantry across the Tigris without losing one man (Fuller 357). Alexander next traveled south, keeping the Tigris to his right, when four days later his own scouts reported sighting the Persian army not far ahead. He immediately

arrayed his army into the order of battle while still advancing forward. After additional scouts came back with an updated report of there only being a small cavalry force, Alexander rode ahead with the Royal Companion squadron, one Companion Cavalry squadron, and the Paeonian cavalry. After a brief chase most of the Persians had fled but Alexander was able to capture a few prisoners, from whom he learned where Darius was actually camped.

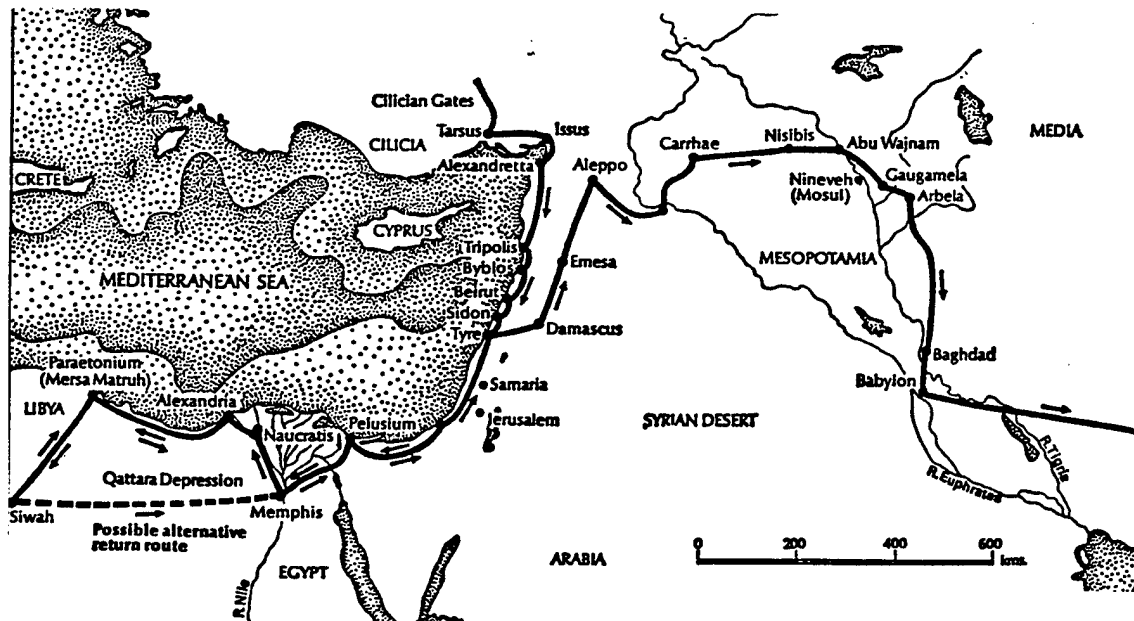


Fig. 8. Map of Mediterranean Seaboard and Mesopotamia. Reprinted from Peter Green, *Alexander of Macedon* (Berkeley: University of California Press, 1974), 249.

Darius meanwhile, after learning from his own scouts that Alexander did not come down the Euphrates, had packed up his army and marched north towards Arbela. Darius planned to use an advance force under Mazaeus, the Persian satrap of Babylon, to slow Alexander at one of the possible ford sites along the Tigris while he rushed north with the main army to destroy Alexander. Unfortunately, Mazaeus selected the easiest ford site and the closest to Arbela for his blocking force, but instead, Alexander selected the northern most ford and crossed the river unopposed. The

only advantage that Darius still controlled was in the selection of the battlefield. He chose the wide plain of Gaugamela for its maneuverability space for his large army and ordered the ground to be leveled in preparation for his chariots and cavalry charge.

It is interesting to note, that both Alexander and Darius wanted the battle to be fought east of the two great rivers. For Alexander, it meant a pitched battle against the Persian army on the open plains where he could deliver the final catastrophic blow in one battle. He did not want to stretch out his supply lines and tire his soldiers in smaller, successive engagements. For Darius, it meant that he could destroy Alexander with his back to the river and nowhere to escape to.

Another advantage was that if the battle did go poorly for Darius, he had an escape route along a major road to Babylon.

Various reports state Darius' army consisting of as many as one million infantry and one hundred thousand horse to as few as two hundred thousand infantry and forty-five thousand cavalry. It is quite feasible that Darius could enlist the one million infantrymen as some claim, but it is less likely that he had one hundred thousand horse. For two years since the Battle of Issus, Darius was recruiting more soldiers from his empire. Even though Alexander conquered Egypt, Syria, and Asia Minor up to the Euphrates river, this was actually only a small portion of the Persian empire. Darius recruited soldiers within his empire from the Euphrates river to as far east as the Indus river and as far north as the Jaxartes river (Northern Afghanistan). He did not lose his soldiers to any major battle or campaign for the defense of his empire during those two years, most likely waiting for Alexander to wear himself down and come to Darius. The forty-thousand horse is more acceptable than the highest numbers given in that it takes much longer to train and equip cavalymen. Additionally, the previous battles fought between Alexander and Darius mostly centered on the Persian cavalry and mercenary infantry, both forces taking the majority of losses and therefore already severely depleted.

The Persian forces were aligned east to west, blocking Alexander's advance south to Babylon. The following order of battle was found in a collection of captured documents in the Persian camp after the battle. It gives the best information to date on the organization and placement of the various units in Darius' army. The Persian army formed into two main battle lines and a smaller skirmish line out front. The right wing of the Persian army, consisting of cavalry from the western provinces, was commanded by Mazaeus. In order from the right in the first main battle line were the Coele-Syrians; Parthian cavalry; Tarpurians cavalry; Hyrcanian cavalry; and the Albanians. In Mazaeus second battle line, from the right were the Mesopotamians; Medes; Sacians; and the Sacassinians. On the left wing were the cavalry from the eastern provinces and commanded by Bessus, satrap of Bactria and a cousin to Darius. In order from the left of the first main battle line were the Bactrian cavalry; the Daans; the Persian cavalry; and the Susians.

In Bessus' second battle line, from the left were the Arachotians; Persian infantry; and the Cadusians. The center was commanded by Darius who was surrounded by fifteen thousand body guards, or Kinsmen, and on either side of Darius were the Greek mercenaries. Darius' second battle line included, from the left, the Sitacenians; Red Sea troops; Indians; Carians; Babylonians; and the Uxians. The skirmishers directly out in front of Darius included fifteen war elephants and fifty scythed chariots on either side of the elephants. These were closely followed by the royal squadron consisting of one thousand horseguards, with spears butted with golden apples, and a contingent of Mardian archers. The left wing skirmish line consisted of an additional one hundred chariots, one thousand Bactrian cavalry, and the Scythian cavalry. The right wing skirmish line contained the Armenian cavalry and the Cappadocian cavalry (Fuller 371). Additionally, some of the cavalry units at this time wore the new link armor and carried spears instead of javelins.

Alexander organized his army with the standard infantry phalanx in the center supported on either wing with his cavalry. Arrian states Alexander's force totaled seven thousand cavalry and forty thousand infantry. His most trusted general, Parmenio, commanded the cavalry on the left wing and Philotas, son of Parmenio, commanded the seven Companion cavalry squadrons on the right wing. The royal squadron, commanded by Clitus and accompanied by Alexander, was out front and to the extreme right of the Companions. To the left of the Companions, in successive order, were the agema of hypaspists; the remaining hypaspists under Nicanor, son of Parmenio; the six taxis of phalangites with the last taxi commanded by Craterus, who was also in command of the infantry on the left wing; the Greek Allied commanded by Erigyus; and the Thessalian cavalry. Parmenio was with the Pharsalian ile of the Thessalian cavalry out front and to the extreme left, very much similar to Clitus on the right wing. Out front of the right wing were one half of the javelinmen, the Cretan archers, and one half of the Agrianians. These units were not in the usual open order skirmish line, but rather organized as three cohesive, combat units.

Since Alexander was vastly outnumbered and overlapped, he dramatically changed the tactical array of his forces to counter the threat while still retaining offensive capability. First, both wings were turned back to an angle of forty five degrees to help prevent encirclement. Second, Alexander strengthened his wings and center for the first time with tactical reserves with orders to turn about if the enemy attacked from behind. This second line could be used to protect his rear, flanks, reinforce gaps in his lines, or as a counter-attack against the enemy flanks.

Acting as a flying reserve column on the right wing, in echelon from front to rear were the Greek Mercenary cavalry; Poenian cavalry; Prodromoi lancer cavalry; one half of the Agrarians; Macedonian archers; and the Greek Mercenaries. Within the flying reserve column on the left wing with similar ranks were the Greek Auxiliary cavalry; the Odryssian cavalry; Greek Allied cavalry commanded by Coeranus; and a portion of the Thracian infantry. The peltasts were arrayed

behind the phalanx to act as their reserve force. One last group of Thracian infantrymen were left to protect the baggage train, prisoners, and non-combatants in the rear, about seven miles behind the battlefield.

This initial array of forces placed Alexander's right wing, in which he was also positioned, directly opposite Darius' center and the chariots. Alexander began moving his forces to the right to reduce the chances of a double envelopment and to position his infantry in front of the chariots since they were less prone to a chariot charge. It would also move the battleground onto a piece of terrain that had not been prepared by Darius and was less conducive to chariots.

Darius saw his advantage of outflanking Alexander's right flank slowly slipping away so he launched his chariots against the phalanx and his lead squadrons of Scythian cataphracts and Bactrian cavalry to envelop Alexander's right flank. The majority of chariots were quickly disposed of by the javelinmen, slingers, and archers who were stationed out front. The phalanx skillfully opened ranks, allowing the chariots to pass through their formation without causing any disruption, and let the lightly armed peltasts in the reserve to destroy the chariots.

To counter the envelopment, Alexander ordered forward the Greek mercenary cavalry but they were immediately repulsed by the much larger enemy force. Alexander next ordered forward the Paeonian cavalry and they had some initial success in pushing back the Persian cavalry.

Bessus, however, attacked with his remaining fourteen thousand Bactrian cavalry, who like the Scythians wore much better armor than the Macedonians, were able to push Alexander's cavalry back once more. Alexander and his royal squadron assisted in holding the right wing while he ordered forward his last reserve cavalry from the right wing, the Prodromoi lancers, to charge the left flank of Bessus' cavalry. The enemy flank attack was temporarily halted and Alexander seized the opportunity to launch his remaining Companion cavalry squadron by squadron against Bessus and defeat them.

When Darius recognized that Alexander's right wing was fully committed to battle, he launched his Armenian and Cappadocian cavalry forces against the Macedonian left wing, still hoping to envelop both flanks of Alexander's army. The Thessalians on the left wing were hard pressed but continued to hold off the Persian cavalry charges to give Alexander the time he required for the decisive blow. As the Persian cavalry moved to their left to counter Alexander's oblique movement, they inadvertently created a gap between themselves and the first line infantry units. The Persian second battle line should have filled the gap but failed to do so. Alexander recognized the opportunity and formed his Companions, hypaspists, and two taxis of infantry into a wedge and charged toward the gap. As it happened, Darius also happened to be near the gap and at the center of Alexander's attack and as in previous battles, lost his nerve after a brief fight and fled the battlefield. The Persian center also began withdrawing when they saw their King retreating and could not stand up to the onslaught of the Macedonian sarissa. Although far from being finished, this was the turning point of the battle.

The fight on the Macedonian left wing and in their center was still very much undecided. The farthest left two taxis of infantry had wheeled to their left to assist Parmenio in holding off the attacks by Mazaeus, and the remaining two center taxis had marched forward to support Alexander's charge. This left a gap between the left and right wing of the Macedonian army through which the Parthian, Tarpurian, and Hyrcanian cavalry exploited. However, instead of attacking into the flank of either Parmenio or Alexander, they charged straight ahead for the baggage train. While the Thracian infantry guarding the baggage trains attempted to hold off the enemy cavalry, they were also attacked in the rear by their prisoners whom they were guarding. Fortunately, the left wing reserve had immediately pursued the enemy cavalry and was able to attack them in the rear, killing large numbers of them and ultimately chasing them away from the baggage train. During their retreat back to the Persian lines, they ran headlong into Alexander and

his Companions, who were on their way to relieve the endangered Parmenio. These Persian cavalry were almost destroyed to a man as they were caught between two Macedonian cavalry forces.

After solidly defeating them, Alexander continued towards Parmenio, who by now was in control of the battle within his area against Mazaeus. Alexander then ordered a pursuit to destroy the escaping Persian army and capture Darius himself. Although Darius escaped for the moment, Alexander was the undisputed ruler of Persia. He lost only five hundred Macedonians in the battle, compared to the Persian losses estimated between forty and ninety thousand (Fuller 384). In addition, Alexander captured much of Darius' royal treasure and property in Arbela and Parmenio captured the Persian camp at Gaugamela.

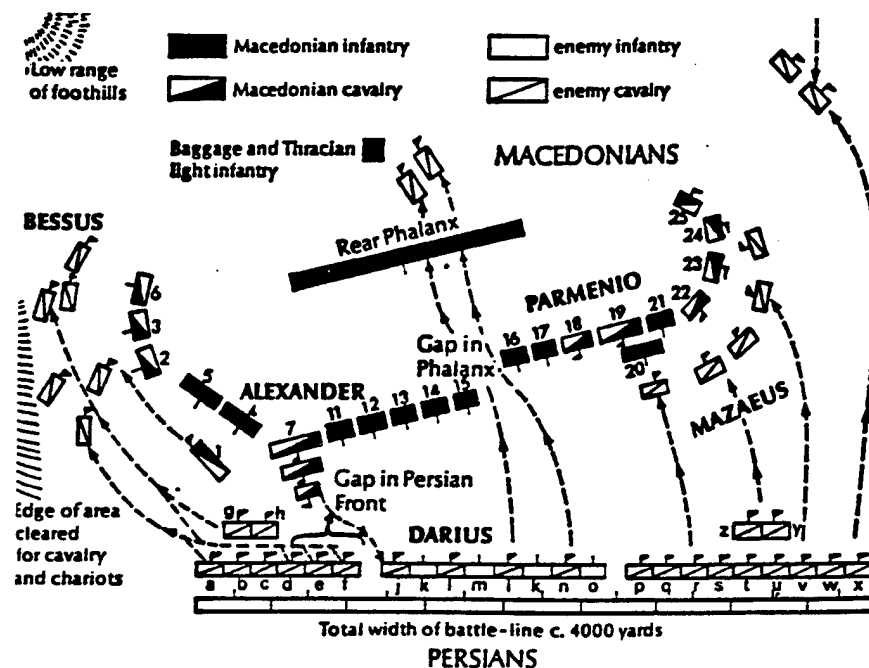


Fig. 9. Map of Battle of Gaugamela. Reprinted from Peter Green, *Alexander of Macedon* (Berkeley: University of California Press, 1974), 291.

This was an amazing battle when you consider the ratio of combat power favored Darius by as high as twenty-three to one, or at least as low as five to one, depending on whose records you read. Regardless of the actual statistics, the bottom line is that Alexander was greatly outnumbered but the outcome was the same. Alexander's advantages lay in his leadership ability, the quality of training of his subordinate leaders and soldiers, and the sarissa. The Persians did not have a great leader in Darius, but both Mazaeus and Bessus were competent subordinate leaders. The Persians also had an advantage in the new chain-linked armor.

Alexander won by using one of the reserve flying columns to strike at the flank of the Persian left wing attack and the other cavalry reserve to strike at the Persian cavalry attack up the center of Alexander's army. Placement of his reserve peltasts and skirmishers also defeated the chariots when they worked in coordination with both the heavy infantry and the cavalry. This was probably the first time in history that any army used a reserve force (Brownstone 35). The decisive point was when Alexander formed a wedge of his Companion cavalry, hypaspists, and heavy infantry to strike at the gap in the Persian line. Although Alexander had used the wedge formation in previous battles, this was the first time that it involved three different combat arms.

Another significant addition to tactics was Alexander's use of successive attacks against superior numbers. When he sent his outnumbered cavalry in a sequenced squadron after squadron assault against the superior Persian left wing, Alexander proved that the Persian mass was not sufficient enough to win a battle. By phasing his fewer cavalry squadrons in wave assaults, Alexander was able to keep the larger enemy force at a safe distance away from his phalanx by exerting continuous pressure. "This is best explained by Napoleon's account of the cavalry fights between the French and the Mamelukes. When the Arabs were on the point of overwhelming the first, the second came to its assistance" (Creasy 76). If he had committed the entire cavalry in one body, they would have been ultimately destroyed, thereby exposing the vulnerable flank of his

phalanx to attack. A similar tactic will often be repeated in the future when riflemen fired in volleys by rank, thereby maintaining a continuous volley of fire on the enemy.

CHAPTER 5

THE ASIATIC CAMPAIGN

Alexander now marched on Cyropolis, near the Jaxartes, the farthest point attained by Cyrus in his conquests. In one of his mountain battles he was again wounded, but still continued his activity, carried in a litter. Arrived at the Jaxartes, Alexander founded another namesake town on its banks. He was anxious to make this section of his kingdom self-governing, but his efforts in this direction were misunderstood, and an uprising ensued. Alexander took the matter sharply in hand, moved against and destroyed seven cities, to which the rebels had retired. But he was again wounded by a sling-stone. He then crossed the Jaxartes, and defeated the Scythians in so marked a manner that they were glad to make a permanent peace (Fuller 464).

After the battle of Gaugamela, Darius fled towards the Armenian mountains in Media to escape Alexander. Accompanying Darius were the survivors of the Bactrian cavalry, the royal kinsmen, a few remaining "Golden Apples" from the royal squadron, and some two thousand of the Greek mercenaries (Arrian {R} I:273). Darius took the northern escape route because he correctly assumed that Alexander would continue marching towards Babylon and Susa. Alexander did in fact lead his army directly to Babylon at a quick pace in order to capture the city before it was reinforced because he knew that Mazaeus had retreated towards Babylon with the remnants of his forces. He also did not want a repeat of the siege of Tyre because the city walls of Babylon were three hundred feet high and very defensible. On his march towards the city, Alexander was met by the leading citizens of Babylon who surrendered the city without a fight. Here again, Alexander displayed his qualities of leadership and foresight by integrating the Persian people into his empire by appointing Mazaeus as satrap of Babylon instead of ordering his execution.

After a short stay in Babylon to rest his soldiers, Alexander marched towards the city of Susa. Here again he was met along the way by representatives from the city and it surrendered Susa to Alexander without a fight. As in Babylon, Alexander took over all of the royal treasure and luxuries, including artwork that had been stolen from Greece by Xerxes. Another Persian was appointed as satrap of Susa, further enhancing Alexander's prestige among the local natives. As in

Babylon and previous cities where Alexander placed natives in civilian control, he also placed his own trusted Companions or generals in charge of the garrison or military affairs. This assured Alexander of retaining some sort of control over the citizens if they forgot who their new ruler was. While resting at Susa, Alexander received fresh reinforcements from Antipater in Macedonia, and in return, Alexander sent three thousand silver talents back to support Antipater's struggle against the Spartans. Even though Alexander had defeated Darius in their last great confrontation, the struggle was not over. Alexander still had to subdue the individual tribes that had paid tribute to Darius. Without their subjugation, Alexander could not control his steadily growing and vast empire or secure his lines of supply as he marched further east. As he marched east into Persia the first tribe that he encountered and defeated were the Uxians. After their defeat they were required to pay an annual tribute of one hundred horses, five hundred transport animals, and thirty thousand sheep (Arrian {R} I:281).

The next major obstacle that Alexander faced was at the Persian Gates. This was a narrow mountain defile that literally separated western Persia from eastern Persia. At the gates Alexander found that Ariobarzanes, the satrap of the Province of Persia, had already fortified the pass with a wall and was defended by forty thousand infantry and seven hundred cavalry. His first assault was repulsed by the Persians who had command of the high ground and were safely established behind defensive positions. Alexander split his force, leaving Craterus to make a demonstration to the front of the enemy while Alexander led the rest of his around to the rear of the Persian position, guided along a narrow path by recently captured prisoners. Alexander immediately fell upon the defenders from behind, who tried to escape, but were blocked and destroyed by Craterus to their front.

Having successfully crossed the mountain range and finding himself within the interior of Persia, Alexander marched for Media in search of Darius, who had positioned himself in the city of

Ecbatana, just south of the Caspian Sea. Along the way, Alexander subdued the Paraetacae, appointing over them the former satrap of Susa, Oxathres. When he arrived at Ecbatana, Alexander learned that Darius had already fled eastward toward the Caspian Gates. While in Ecbatana, Alexander dismissed the Thessalian cavalry and the other allies, excluding the Greeks, and sent them back to the Mediterranean Sea to be transported back home. He paid them all their due salaries and included two thousand talents of gold from his personal treasury to show his gratitude. Many of the cavalry volunteered to remain with Alexander as paid mercenaries, which Alexander promptly enlisted. Alexander directed Parmenio to take the mercenary infantry, Thracians, and the remaining mercenary cavalry to march against the Cadusians and Hyrcanians. Cleitus was ordered to march against the Parthians with six thousand Macedonian infantry and a few cavalry and light auxiliaries. Alexander took with himself the Companion Cavalry, the Greek Allied cavalry, the Prodromoi cavalry, archers, Agrianes, and the remaining infantry phalanx in search of Darius.

Arriving at the city of Rhagae only eleven days since leaving Ecbatana, Alexander was forced to rest his exhausted soldiers for five days after completing such a rigorous march. After departing Rhagae, Alexander arrived the next day at the Caspian Gates, which was the entrance to the large Parthian Desert. While waiting near the Caspian Gates for his soldiers to forage as much food as possible, Alexander was informed by visitors that Darius had been arrested by Bessus, Nabarzanes, and Barsaentes the satrap of the Arachotians and the Drangians.

Alexander again split his forces, taking with him only the Companion Cavalry, the Prodromoi, and the swiftest infantry for his pursuit of Darius and Bessus. For two days Alexander rapidly pursued Darius and his captors until he came upon a village where Bessus had just departed. Alexander dismounted five hundred of his more weary cavalymen and put in their place the fittest of his heavy infantry and took after Bessus along a shortcut. Nicanor was to

immediately pursue Bessus along the route he had taken with the hypaspists and Agrianes, being the lightest troops, and for the rest of the phalanx to follow at a more leisurely pace. Traveling through the night, Alexander came within sight of Bessus and his followers the next day and gave one last charge to catch them. Most of the Persians and Bactrians managed to escape after mortally wounding Darius and leaving him by the side of the road. He died before Alexander arrived, a fugitive betrayed in his own country. Alexander gave orders for Darius to be buried with all honors due a king in the Persian royal tomb.

After Alexander consolidated his forces that were separated during the great chase, he continued marching after Bessus and subjugating the various Persian territories. To more effectively accomplish this task, Alexander split his forces into three wings that were to each advance along a route and trap Bessus. They would all join together at Zadracarta, the capital city of Hyrcania, from which he eventually conquered the Tarpurians, Mardians, Hyrcanians, Areians, and the Zarangaeans. While Alexander was conducting his campaigns from Zadracarta, various envoys came to seek a peaceful alliance with Macedonia. The majority of these envoys he sent home with peace agreements and allowed them to maintain their role as satrap, but left behind more of his Companions and soldiers to monitor their actions. One special group of envoys came from the Greek mercenaries who had fought for Darius. He pardoned those Greeks who had fought with the Persians prior to the Macedonia-Greece alliance, of the others he recruited into his army at their same rate of pay (Arrian {R} I:307).

Alexander now had his whole force reassembled together and took after Bessus, who was the satrap of Bactria, and his supporters the Bactrians. During his march towards Bessus, Alexander was informed that Satibarzanes, satrap of Areia, had massacred the Macedonians garrisoned in their cities. Alexander diverted his march to the south-east corner of Persia to deal with this new trouble. He eventually killed Satibarzanes and crushed the rebellion. Along the way,

Alexander learned of a plot by Philotas, son of Parmenio, to kill him. Parmenio's other son Nicanor, commander of the hypaspists, had just recently died from disease in Media. After a short trial where he denied having any part in the plot but was found guilty for not informing Alexander, Philotas was executed by javelins. Alexander also directed that Parmenio be put to death by his generals, not so much as being guilty of conspiracy, but because of his influence over much of the army. Alexander replaced Philotas with two new officers, splitting the Companion Cavalry into two separate units, so that no one man would have command over such a large unit.

Having resolved the first of many internal disputes, Alexander continued north in the campaign against Bessus, defeating the Drangians, Gadrosians, and the Arachotians during his march. During this segment of his campaign, Alexander encountered many natural obstacles along the way that included the highest mountain range in Asia, the Caucasus; the largest river west of India, the Oxus; and through deep snow and a harsh winter. Before he crossed the Oxus in hand-sewn leather rafts, Alexander dismissed the oldest Macedonians and the volunteer Thessalians and sent them home with his gratitude.

After effectively negotiating the natural obstacles, Alexander eventually defeated the Bactrians and captured Bessus, executing him in his own capital city of Bactra. At this point, Alexander recovered his cavalry with replacement horses since a large number had been lost crossing the mountains and river. Only then did he march towards the river Tanais, called Jaxartes by the natives and which many historians regard as the boundary between Asia and Europe (Arrian {R} I:329). While at the river, a small party of Macedonians who were out foraging were attacked by the local tribe. Upon hearing this, Alexander attacked the tribesmen in their mountain stronghold, himself being wounded by an arrow, breaking part of his leg bone in the process. Only eight thousand of the thirty thousand natives were able to save themselves. This was to be Alexander's first action against the Sogdianas' and the Scythians along the Jaxartes river.

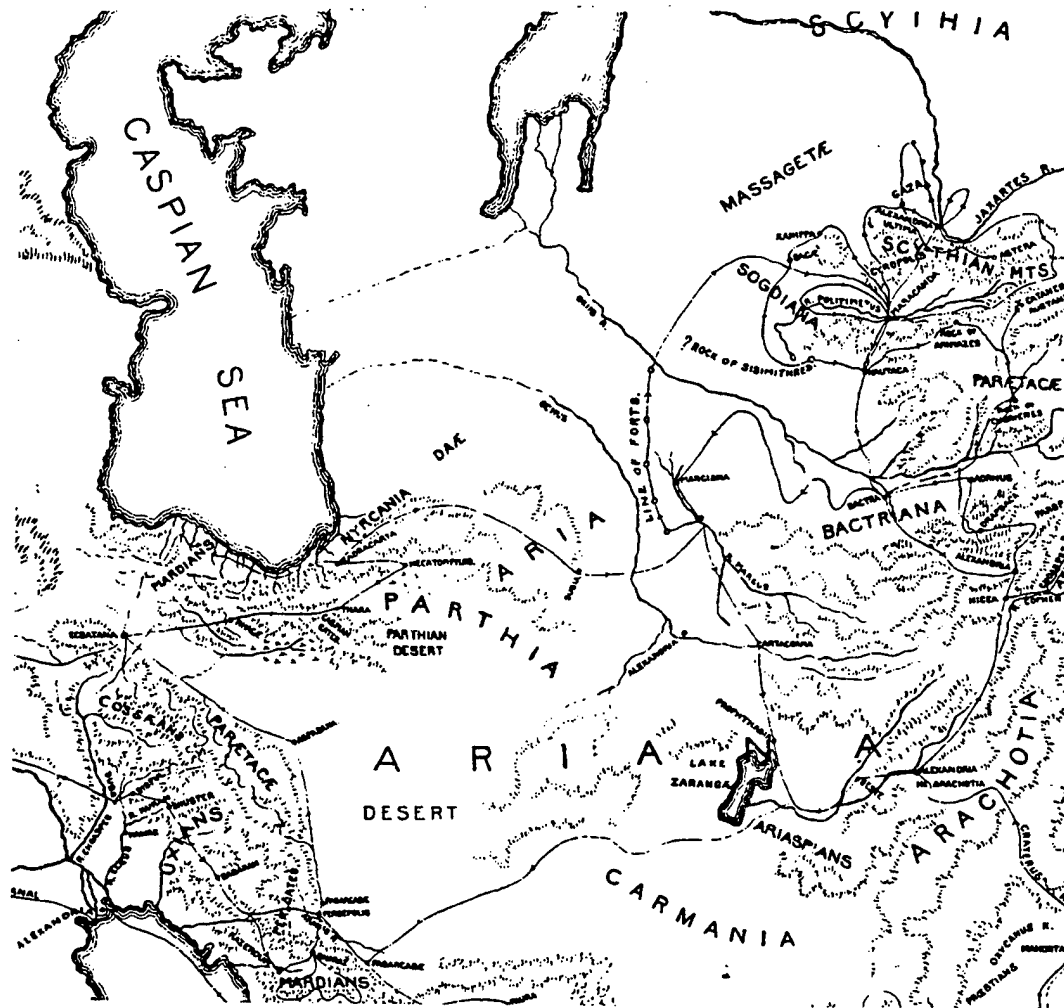


Fig. 10. Map of Alexander's Route to Jaxartes River. Reprinted from Theodore A. Dodge, Alexander (London: Greenhill Books, 1994).

After the battle of Issus and particularly Gaugamela, Alexander made significant changes to the organization of his army. The first change was to retire his old soldiers and send them home. At first glance this appeared to be an act of kindness towards his soldiers, but many of them took it as an insult because they were replaced with Persian soldiers. This would cause Alexander future problems with his army. He also disbanded many of his non-Greek allied units, keeping only the mercenaries and Greek allied contingents. Alexander also incorporated many Persian nobility into

the management of the captured territories, thus infusing the conquered Persian empire within the Greek empire.

Alexander typically made any tactical changes to his doctrine or organization during long periods of rest and after he would receive large numbers of replacements. This helped to ease the transition of the new soldiers into the army and make the changes less noticeable to his veterans, who always seem less responsive to changes. Regardless of the timing, he did not hesitate to institute any change during the course of the campaign to compensate for known weaknesses after encountering new enemies. His first significant tactical change was the formation of two or more companies of cavalry in each squadron. The original cavalry was divided into eight ile (squadron) of two hundred horsemen, except the Royal ile (Agema) which probably mustered three horsemen. Alexander reorganized the cavalry into seven, then eight hipparchies consisting of two or more lochoi (companies) for a total of five hundred horsemen. He first increased the strength of the cavalry to better deal with the guerrilla warfare that he was encountering and then later to compensate for the demobilization of the Thessalian cavalry. As stated previously, the Companion Cavalry was also broken into two distinct units so that no one officer had so much combat power under his own command and control.

He also started relying more on his brigade commanders to conduct their own operational campaigns, as he often separated his forces into brigade and division size units to attack the widely dispersed enemy forces. Alexander may have been the first commander to use mounted infantry to exploit success with combat power through speed during his chase after Darius. Alexander then continued mounting his javelinmen until he had a complete brigade of mounted infantry, that were used in continuous operations ever thereafter. At Gaugamela, Alexander had instructed his men to maneuver using silent signals, and only when the sound was given by Alexander, then they could use their trumpets and yells. This was done to confuse the enemy who supposedly knew

Alexander's different trumpet signals. From then on he used a system of torches at night and smoke during the day to give the initial battle signal (Dodge 393).

Shortly after his first encounter with the natives along the Jaxartes river, Alexander received envoys from the Abian Scythians and the European Scythians. In return, Alexander sent some of his Companions back with the envoys to arrange a peace agreement with their respective rulers. Additionally, his Companions were acting as spies to determine the size of the Scythian empire and to see how advanced they were in technology and culture since the European Scythians were the largest empire in Europe (Arrian {R} I:335). As Alexander was beginning to incorporate the nearby tribes into his empire, the citizens of seven local cities killed the Macedonians who were garrisoned there. The tribesmen were also assisted by some Bactrians and the people of Sogdiana.

In order to effectively put down the revolt quickly and without allowing the natives to reinforce each other's city, Alexander sent Craterus with his infantry brigade to the largest city, Cyropolis, and encircled the town. Alexander, meanwhile, immediately marched on the nearest city, Gaza, and began a direct assault. As the infantrymen attacked the city walls, the archers, slingers, javelinmen, and catapults released their missiles. This coordinated attack prevented the citizens from defending the walls and the infantry easily scaled the walls using ladders that Alexander had ordered made by each squad. Once inside the city, the Macedonians killed all of the enemy soldiers and captured the women and children. They immediately marched on to the next city and destroyed it as quickly and efficiently as the first. The next day he advanced to the third city and used the same tactics with as much success as at the first two cities. At the same time, Alexander dispatched his cavalry to the next two cities to prevent them from escaping or reinforcing their neighbors. They did exactly what Alexander anticipated and they were all destroyed outside their city walls by the cavalry.

After capturing the first five cities in only two days, Alexander marched against Cyropolis. As he prepared to assault the city with the same previous methods, Alexander observed dry river channels that came out from beneath the city walls. While the heavy infantry and catapults were attacking the main wall, Alexander slipped in unobserved through the channels with a select few of his hypaspists, archers, and Agrianes. After clearing the city walls from within, they opened the city gates and allowed the rest of Alexander's force to enter. The city defenders turned about to face the new threat behind them and this allowed the rest of Alexander's heavy infantry to easily enter the city. Eight thousand men were killed in the immediate fighting and the remaining fifteen thousand soon surrendered to Alexander. The seventh city surrendered to Alexander without a fight and the rebels were placed under guard until they were eventually released.

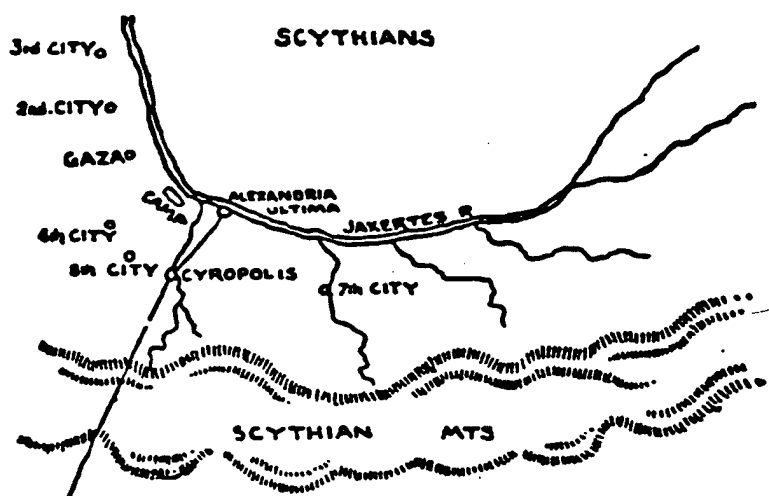


Fig. 11. Map of Seven Cities Campaign on Jaxartes River. Reprinted from Peter Green, Alexander of Macedon (Berkeley: University of California Press, 1974), 468.

Alexander spent the next twenty days building the walls of his newest city, Alexandria Ultima, at the apex of the Jaxartes river where it touches the Scythian mountains. He planned on settling the new city with many of the Greek mercenaries or older Macedonians that so desired to

retire. While Alexander was building his latest city, an army of Asian Scythians arrived on the opposite side of the Jaxartes river. Alexander delayed attacking the Scythians as long as possible, but they kept hurling insults against the Macedonians that Alexander finally resolved to disperse them. After preparing his hide-skin rafts for another river crossing, Alexander placed his catapults alongside the river bank and began firing. The Scythians were amazed at the range of these new weapons and pulled farther back from their side of the river. Alexander immediately transported the archers and slingers so that they could bring their own weapons within range of the Scythians and keep them away from the crossing site. This helped to protect the infantry as they crossed the river, and also the cavalry, which was the last unit to cross. Once his entire army was formed on the far shore, Alexander attacked the Scythians, who retreated after a short fight and losing about one thousand men. An envoy from the king of the Scythians soon arrived apologizing for the action but declaring that it was the action of independent raiders and not the Scythian kingdom.

Also during this same time, Alexander was required to dispatch Pharnuches the interpreter with sixty Companion Cavalry, eight hundred cavalry mercenaries, and fifteen hundred infantry mercenaries to Maracanda, the capital of Sogdiana. Spitamenes of Sogdiana was blockading the few Macedonians that were garrisoning the citadel there and preparing the citizens to revolt. When Spitamenes heard that a Macedonian army was approaching, he began a general retreat, gaining the alliance of a nomad tribe of Scythians along the route. During the pursuit, Pharnuches and his army were ambushed and all but forty cavalry and three hundred infantry escaped.

When Alexander heard this, he took half of the Companion Cavalry, the archers and Agrianes, and the lightest-armed infantry and marched directly for Maracanda. He ruthlessly attacked all of the cities and forts within the province because they may have participated in the massacre. Alexander searched the entire region looking for any fugitives that may have escaped, stopping only when he came to the beginning edge of the desert. As another year of his campaigns

was coming to an end, Alexander decided to winter over in Zariaspa and rest his army. It was during this winter rest that Alexander began adapting the traditional dress and headgear of the Persians and Medes over the conventional Macedonian dress, actions which would have lasting affects later on.

Before Alexander could march towards India, he had to put down yet another series of revolts in Sogdiana and Bactria. He left four brigades to stay in Bactria and assist the satrap in preventing any further trouble and to destroy those cities which had already revolted. Of the army remaining with Alexander, he divided it into five columns to advance along separate routes and destroy all the rebel fortifications they encountered. After traveling the greater portion Sogdiana, Alexander's army joined back together at the city of Maracanda. From there, Alexander sent his brigades after Spitamenes once more as he had begun raiding again, this time joined by the Massagetae Scythians. As part of Alexander's pursuit of Spitamenes, he made it very difficult for Spitamenes' soldiers to find forage because Macedonians were occupying all of the cities and guarding the crops. Forced with starvation, the Bactrians and the Sogdianians deserted Spitamenes and turned themselves in to Alexander. When the Massagetae Scythians learned that Alexander himself was chasing them, they cut off Spitamenes' head and sent it to Alexander to divert him from chasing them anymore.

With the spring of a new year approaching, Alexander took his army to the Rock of Sogdiana, a mountain stronghold for the last of the rebel Sogdianians. The rock was a sheer pinnacle making it virtually impossible to assault. When Alexander tried to talk the Sogdianians and offered them free passage home if they gave up their position, they laughed at Alexander and told him to go find winged soldiers to assault their fortress, they were this confident of their position (Arrian {R} I:401). This only increased the Macedonians determination to find a way to dislodge the enemy from their stronghold. A number of soldiers who had previous rock-climbing

experience took their iron tent stakes and linen ropes and started the ascent at night. They climbed to the highest point, arriving at dawn, and immediately signaled Alexander with linen flags as previously arranged. Alexander then went to the nearest enemy guards and told them to give themselves up because he had found his winged soldiers and pointed to his soldiers on the top of the mountain (Arrian {R} I:403). The Sogdianians, completely caught off guard, immediately surrendered to Alexander. Included among the captives were the wife and children of Oxyartes, the Bactrian, who had sent his family to the rock during his rebellion in Bactria. One of his daughters, Roxane, was said to be the most beautiful woman, next to Darius' wife, in all of Asia. Alexander immediately fell in love with her and eventually married her.

There remained in northern Persia only one last tribe holding out against Alexander's rule, the Pareitacae. This tribe had taken refuge in another fortified a mountain top called the Rock of Choriene, named after their tribes leader, Choriene. Undaunted by the fortress, Alexander had his troops begin building an earthen ramp up towards the mountain summit. At first Choriene and his soldiers laughed at such an attempt, but when Macedonian arrows began to come within range and find their mark, Choriene naturally became concerned. He was further frustrated when his attempts at counter-fire proved to be ineffective because the Macedonians had built overhead protection above their ramp. Choriene was now in a very difficult situation. Soon the ramp would be completed and the Macedonian army could easily assault his fortress, similarly, the same natural obstacle that impeded Alexander also prevented Choriene from escaping. The situation was peacefully resolved after Oxyartes came and spoke with Choriene, showing him the futility of the situation and also ensuring Choriene that Alexander could be trusted. Choriene surrendered to Alexander, even providing supplies for Alexander's army to march back to Bactria. Now that spring was coming to an end of another year, Alexander took the majority of his force and marched

towards India. He left Amyntas behind to garrison Bactria with three thousand five hundred cavalry and ten thousand infantry (Arrian {R} I:413).

One of the significant controlling factors during this campaign is the amount of guerrilla warfare that Alexander came up against, which was very uncharacteristic for ancient armies who usually stood toe to toe with their enemies. This new style of fighting required Alexander to make important changes to his doctrine, causing further evolution of combined arms warfare. On several occasions, Alexander divided his forces into separate columns consisting of: one to three regiments of cavalry; some mounted infantry; one or more heavy infantry brigades from the phalanx; a brigade of hypaspists; a battalion of slingers; and a battalion of archers. This brought the control of a combined arms team from corps level down to a division or even a brigade level. Throughout the major portion of this campaign, Alexander relied upon his brigade commanders to make their own decisions since they were often off operating by themselves. This is unique during the ancient period when most armies were personally directed by the king or general.

Another interesting note is that Alexander most always attacked the largest and strongest city first. He correctly identified the enemy's center of gravity as either the government (king/satrap/governor) or the location of the majority of fighting men. The assumption was that by destroying or capturing the centers of gravity, the other cities might surrender without a fight. Another first in the history of warfare was his use of mounted infantry. A battalion was first created and used to chase Darius and again later on against the Mardians. Alexander recognized their value and eventually built up an entire brigade of mounted infantry for use in the Asiatic and Indian campaigns.

CHAPTER 6

THE INDIAN CAMPAIGN

Scarcely had Alexander completed the conquest of Eastern Iran, before he began a vast new undertaking, a march to India. It had given him much thought during the Iranian campaign. When in the winter of 330-29 he was in Arachosia south of the Hindu-Kush, he had come into contact with the so-called Mountain Indians who bordered on this province. It is related that in 328 in his negotiations with Pharasmanes, prince of the Chorasmians, who challenged him to fight the peoples of the northern steppes, Alexander refused the contest on the ground that he was contemplating India as his next goal. Actually he had had dealings with the prince of Taxila (Punjab) in 329-8 when in Sogdiana. The addition of strong reinforcements from the West, and the extraordinary increase in the size of his army point to these new military projects. We may perhaps connect with the special nature of his Indian schemes the fact that in 329-8 he fetched to the camp Nearchus, the friend of his youth, who afterwards played so prominent a part in the maritime enterprises in India (Wilcken 173).

Traveling east to India from Bactria, Alexander passed through the city of Alexandria in Parapamisadae, then on through Nicaea, and finally arriving at the River Cophen, where he sent out emissaries to meet with all of the Indians west of the River Indus. Alexander also divided his force in half, sending Hephaestion and Perdikkas with the infantry brigades of Gorgias, Cleitus, Meleager, half of the Companion Cavalry, and all of the mercenary cavalry to the Indus by route of the Peucelaotis territory. They were to subdue or accept the surrender of all tribes that they encountered and then build a bridge across the Indus. Alexander took with himself the hypaspists, the three remaining infantry brigades, the other half of the Companion cavalry, the archers, Agrianes, and the mounted javelin-men. They would travel along the river Choës through the territories of the Aspasiens, Guraeans, and the Assaceniens to the Indus (Arrian {R} I:416).

Hearing that the tribes along his route were fleeing to fortified cities, Alexander took all of the cavalry and mounted eight hundred heavy infantry and marched at full speed before the tribes could consolidate a strong defensive position. The first city was taken with relative ease, although Alexander was slightly wounded by a dart in his shoulder. The Macedonians did not take any prisoners alive since they were angry that Alexander had been wounded. The majority of the

tribesman escaped however, fleeing into the nearby hills. The second city along the route surrendered to Alexander as soon as he arrived. He left Craterus with his brigade to capture or destroy all the remaining cities within this district, while Alexander marched towards the government of the Aspasiens. There were two short but fierce battles in which Alexander killed the Indian leaders, along with capturing forty thousand others, and ultimately subdued the Aspasiens.

The next territory along his march to the Indus belonged to the Guraeans. They, like the Aspasiens, fled before Alexander, preferring to fight from within their individual fortified cities rather than as a larger army on a field of battle. Alexander, in typical fashion, attacked the largest city first. As he prepared to set up camp outside the city of Massaga, the occupants charged out, thinking they could catch the Macedonians unprepared. Seeing an opportunity to deceive the Indians and lure them further away from their city, Alexander began an organized retreat.

The Indians did just as Alexander expected, and rushed headlong after the Macedonians in disorder. Picking the correct time, Alexander wheeled his army about and charged into the Indians, killing several hundred of them before the rest were able to make it to the safety of their city (Arrian {R} I:429). Alexander attacked the city with his phalanx but was wounded by an arrow in the ankle and withdrew his army for the day. On the second and third day, Alexander attempted to assault the city by siege using his catapults and towers with bridges but were repulsed each time by the defenders. The fourth day was progressing with the same lack of success until the Indian chief happened to be killed by a catapult, then the Indians lost heart and surrendered to Alexander. Part of the Indian force volunteered as mercenaries to join Alexander's army, until he learned that it was only a ploy to escape during the night. Alexander had his army encircle these Indians and destroyed them all.

After laying siege to the next two cities, Alexander advanced to the mountain of Aornos, another fortified stronghold that the remaining Guraeans fled to. Alexander felt more compelled to

reduce this stronghold simply because it was there than for any military rationale. Ancient myths stated that even Heracles, son of Zeus, was not able to capture the mountain. (Arrian {R} I:435). This was most certainly too much of a temptation for Alexander to pass up. The mountain stronghold was only taken after several days of battle because some Indian deserters showed Alexander a hidden trail up the backside of the mountain. Alexander sent part of his force by that route, and after they had established themselves on a crest near the top, he led the remaining forces in a frontal attack hoping to destroy the Indians trapped between the two Macedonian forces. After repeated assaults, Alexander was still unable to dislodge the enemy from the mountain. Alexander then decided to join his forces with those up in the mountain by taking the same path on the other side of the mountain.

Even after Alexander's forces were combined, he was still unable to assault the final mountain crest. He then directed his soldiers to construct a mound from which his missile-throwers and siege engines could reach the enemy fortress. After four days of continuous construction the Macedonian missiles were beginning to hit their intended targets, and the Indians began a hasty retreat. Alexander's soldiers climbed the rest of the way to the top of the rock and chased the retreating Indians, killing as many as they could.

Alexander next marched on the Assacenians, who were reported to have two thousand cavalry, over thirty thousand infantry, and thirty elephants. However, all of the cities that Alexander came upon were deserted, the tribesman having fled to the hills. Sending out his scouts to scour the countryside and to locate the main enemy force, Alexander learned that the Assacenians had fled to Abisarus but had left their elephants behind. Alexander captured these elephants for his own army, then built rafts to float down the river Indus to where Hephaestion and Perdicas had previously built a bridge. Once he crossed the river Indus, Alexander received the alliance of the Taxile Indians and their neighboring tribes, adding five thousand Indians to his

army. He next marched for the river Hydaspes where King Porus of India was waiting on the far shore to prevent Alexander from crossing.

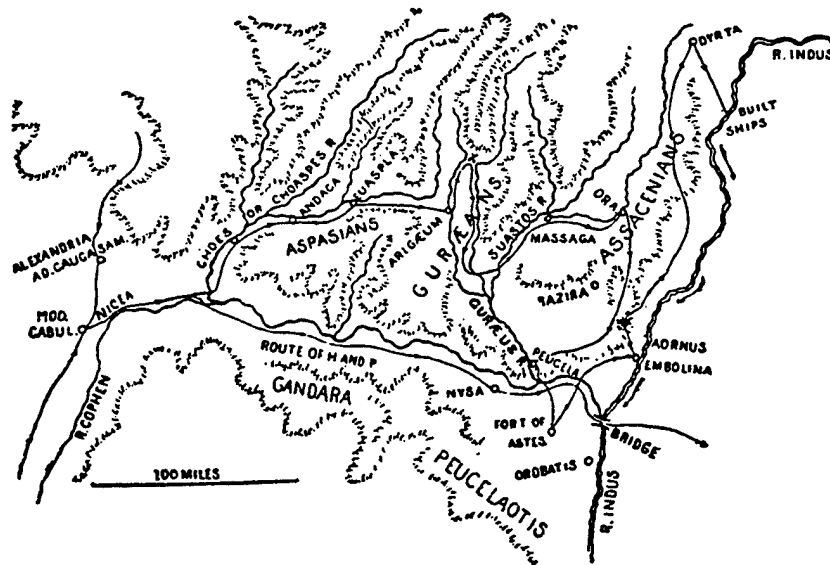


Fig. 12. Map of Alexander's Route From Afghanistan to the Indus River. Reprinted from Theodore A. Dodge, Alexander (London: Greenhill Books, 1994), 514.

As in the previous campaigns, Alexander incorporated local natives into his army, in this case Indians from the west side of the Hydaspes River were more than willing to fight the Indians from the east side of the river. Sometime after the Asiatic campaign and before the battle of the Hydaspes, Alexander created a seventh brigade of heavy infantry from his Macedonians. I do not believe the brigades were made smaller, but with his repeated number of replacements and comparatively low casualty rate, the additional brigade was required out of necessity.

For the upcoming battle, Alexander combined and improved various tactics to execute the first true river crossing operation. Alexander had practiced the maneuver in previous campaigns but across much smaller rivers that were more easily crossed. Alexander's stratagems and ruses used in this battle continue to be used by modern armies. Additionally, this was the first time that

a Greek or Macedonian army had ever confronted an army with elephants, compelling yet more changes to his tactics (Mixture 78).

Porus had made his camp directly opposite Alexander's and stationed guards at all of the other crossing sites as well. Alexander realized he could not make a frontal assault on Porus' camp because he was too well defensively positioned and because the elephants would most likely scare Alexander's horses before they were able to cross. As part of his deception plan, Alexander stationed small units all along the river and kept soldiers marching back and forth to confuse Porus as to the actual crossing site. He also brought in large numbers of supplies and let it be known that he would wait until winter when the river would not be so fast. His most effective ploy was to make night marches with his cavalry and sound the battle cry, causing Porus to react and move his army opposite the false attack. Alexander kept this up for quite some time, until Darius grew tired of it and no longer countered Alexander's feints. Alexander knew that now was the time to attack. He selected as the main crossing site a bend in the river with a island between the two banks that would help to conceal his soldiers movements from Porus' scouts.

Alexander decided to begin the attack at night during a thunderstorm when the rain and thunder would help conceal his movements. Alexander left Craterus in camp with his cavalry regiment, the Arachotian cavalry, Parapamisadae cavalry, Alcetas' infantry brigade, Polysperchon's infantry brigade, and the Indian allies. He was instructed not to cross the river until Porus' army had left to engage Alexander and not even then if the elephants did not leave (Arrian {R} II:37). Alexander also placed three infantry brigades and the mercenary cavalry and infantry between his intended crossing site and Craterus' forces as an intermediate force with instructions to attack if they saw Porus engaged in a main battle. They were placed there as a defensive measure in case some of Porus' army tried to cross and also due to the limited number of boats. As soon as Alexander crossed, the boats were sent to the intermediate forces with orders to

follow across and link up with him as quickly as possible while he continued marching towards Porus (Mixture 80).

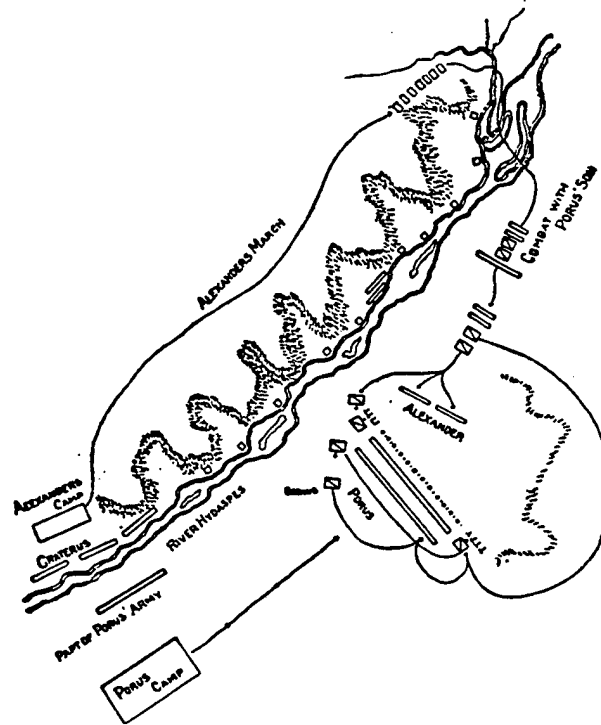


Fig. 13. General Plan of Operations against Porus. Reprinted from Theodore A. Dodge, Alexander (London: Greenhill Books, 1994), 543.

Alexander's initial order of battle from the right was: the Royal Companion Cavalry; the remaining Companion Cavalry regiments; Bactrian, Sogdiana, and Scythian cavalry; hypaspists; and the remaining heavy infantry brigades. On either wings were the archers, Agrianes, and javelin-men while the mounted-archers from Dahae were placed out front of the cavalry. His total force only amounted to five thousand cavalry and six thousand infantry. While Alexander's forces were passing the island, Porus' scouts had ridden back to inform their king of the impending attack. There was a small cavalry skirmish fought between Alexander and Porus' son, sent ahead

to evaluate the situation, in which four hundred Indian cavalry and Porus' son were killed. Porus was also now rapidly advancing towards Alexander, bringing with him four thousand cavalry, three hundred chariots, two hundred elephants, and thirty thousand infantry. Initially, Porus believed that this attack was only another ruse and kept his army opposite Craterus' forces, therefore giving Alexander the time he required to cross the river unopposed.

As the two armies began converging on each other, Porus made the selection of the battleground along a wide opening, level and sandy, providing the maneuverability he required for his chariots and cavalry. Porus arrayed his elephants out front, evenly spaced about one hundred feet apart in a line in front of his entire infantry (Arrian {R} II:49). The second line, consisting of the Indian infantry, was not a continuous line, but formed into small blocks placed within the intervals formed by the elephants, very much similar to the Roman maniples in later years. His cavalry were formed on both wings, with the chariots placed out in front.

Alexander took the majority of his heavy and light cavalry and attacked Porus' left wing, leading with his one thousand Sogdian or Dahaeen mounted archers. He left Coenus with two cavalry regiments, to circle behind his phalanx and attack the Indian cavalry in the rear when they were engaged with Alexander. The infantry were to remain in position until the Indian infantry went into action against Alexander. Alexander's sudden charge had just the disruptive action that he anticipated. Porus' left wing of cavalry was sent reeling towards the center, into the elephants, and his right wing of cavalry charged along the front of his line to support the left wing cavalry. That is exactly when Coenus attacked, into the supporting cavalry's rear, also forcing them into the center amidst the elephants. Porus then began to send his elephants and infantry against Alexander's cavalry but the Macedonian phalanx moved out to intercept them. Hurling their javelins at the elephants and their drivers, the phalanx began to show some limited success. However, when the elephants turned towards the phalanx, they began trampling all the

Macedonians since they were so tightly packed within their phalanx. The phalanx did a hasty retreat, probably for the first time, in order to prevent a catastrophic defeat.

Meanwhile, after Alexander had succeeded in pushing the Indian cavalry inwards, Porus' cavalry gathered their forces and made another charge, but again were repulsed by Alexander's cavalry and sent retreating back to the safety of the elephants. Alexander now gathered his split cavalry forces back into one unit and charged into the Indian ranks, breaking them wherever he rode. The elephants by this time, due to weariness and injuries, became uncontrollable and killed indiscriminately, with the Indians bearing the brunt because they were so tightly packed around the animals. The phalanx, after reorganizing themselves from the earlier retreat, now marched back into the battle and pressed forward the attack into the Indian infantry. The Indians began retreating, as they had to also fight the newly arrived troops which Craterus was just beginning to move over.

Nearly twenty thousand infantry and three thousand cavalry were killed during the battle and in the pursuit. All of the chariots were destroyed, the elephants were either killed or captured, and all of Porus' commanders were captured. Porus himself managed to escape, although he was wounded during the battle. He did not go very far before he was convinced by messengers sent by Alexander to surrender himself. When the two men met, Alexander is reported to have asked Porus what should be done to him. "Porus is said to have replied: Treat me, Alexander, like a king" (Arrian {R} II:61). Alexander was so impressed by the response that he made Porus ruler over all Indians on the east side of the River Hydaspes. After performing the proper burial rituals and the usual victory ceremonies, Alexander left Craterus behind with some infantry to build two new cities. One was called Victoria for his recent victory of Porus, and the other was Bucephala, in memory of his horse Bucephalas who died during the battle. Bucephalas was not killed but died from exhaustion and old age, being nearly thirty years old (Arrian {R} II:61).

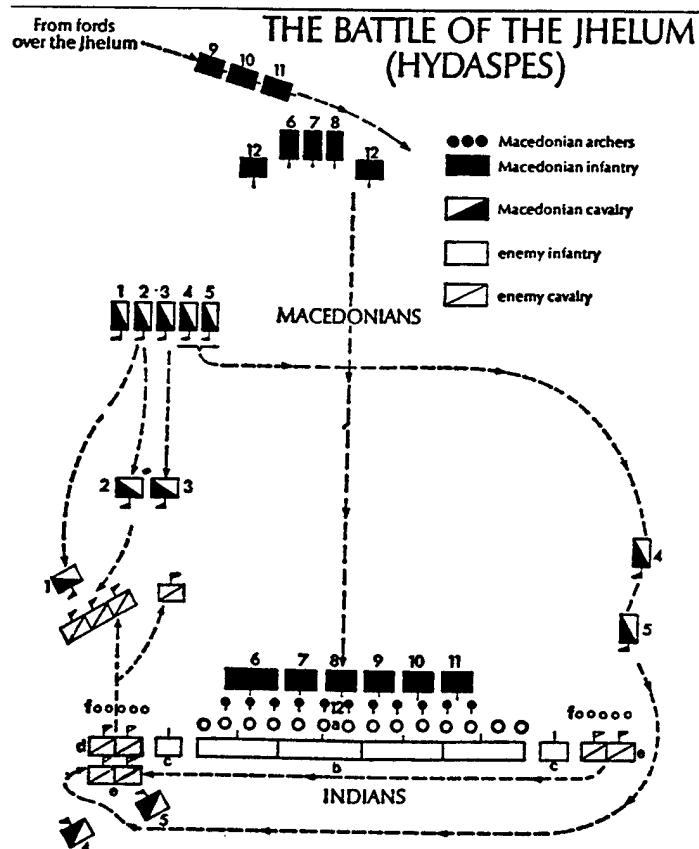


Fig. 14. Map of Battle of Hydaspes. Reprinted from Peter Green, *Alexander of Macedon* (Berkeley: University of California Press, 1991), 398.

After the Battle of Hydaspes, Alexander took the remainder of his army into the territory of the Glaucians, another Indian tribe that bordered Porus' kingdom to the north. He quickly subdued all of their cities and put them under the rule of Porus. Alexander also made peace between Porus and Taxile, then sent the Taxiles back to their own territory as an independent nation. Because there were many independent Indian nations, Alexander split his army into smaller columns commanded by his Companions, and sent each of them in a different direction. This was similar to the campaign in northern Asia, where the smaller tribes could either stay in their fortified cities or disperse into the hills. Alexander used economy of force well to subdue the Indians in as

little as time possible. Most of the independent nations surrendered to the Macedonians. Only the Cathaeans offered any serious type of resistance.

The Cathaeans had built up a triple line of defense with wagons around the city of Sangala. As Alexander approached the outer ring with his cavalry, the Cathaeans did not come out from behind their defenses and fight, but instead remained behind their wagons and fired their arrows. Alexander decided that in the close confines of the wagons this was not the work for his cavalry, but rather better suited for the infantry in close combat. He then dismounted and personally led the phalanx in the assault. The Indians were easily ejected from the first line of defense and made a stand at the second line. Here too, Alexander forced his way through and the Indians retreated back to their city, bypassing the third line of wagons completely. Calling the battle off for the day, Alexander positioned his soldiers around the city as far as he could to prevent the Cathaeans from escaping during the night. He placed the cavalry near a lake and the largest break between his infantry, assuming correctly that is where the Cathaeans would try to escape.

Events occurred just as Alexander predicted, for during the second watch that night the Cathaeans did try to escape but the lead elements were immediately cut down by the cavalry and the remaining Indians fled back to the city. As he was preparing to assemble his siege engines the next day, some Cathaeans deserters informed Alexander that their fellow citizens were going to attempt another escape that very night. Alexander placed Ptolemaeus with three regiments of hypaspists, all the Agrianes, and one brigade of archers and positioned them where the deserters claimed the Cathaeans would escape. The Cathaeans did exactly as anticipated and were beat back into the city once more, losing five hundred citizens in the process. The next day Porus arrived with his elephants and five thousand Indians and Alexander completed assembling his siege engines. Between a combination of siege engines, undermining the walls, and scaling ladders,

Alexander successfully assaulted the city. Some seventeen thousand Cathaeans were killed and another seventy thousand were captured during the assault compared to only one hundred lost by the Macedonians.

Alexander set as his next conquest the territory east of the river Hyphasis for he had heard that the land was fertile, the men were valiant warriors, and the elephants were more numerous and larger than the ones he had. His men however, had different feelings, and the majority of them only wanted to return home. When Alexander heard of the grumbling he called his commanders together and gave them a very patriotic speech, not condemning them, but spoke entreatingly towards them. The entire speech can be found in Arrian's History of Alexander, Book V, Chapter XXVI. There are two enduring insights that can be learned from the speech about Alexander as a man and have been paraphrased below:

But, do you abide constant, Macedonians and allies. It is those who endure toil and who dare dangers that achieve glorious deeds; and it is a lovely thing to live with courage, and to die, leaving behind an everlasting renown. . . . For indeed what great or noble thing could we ourselves have achieved, had we sat still in Macedonia and thought it as enough to guard our own home without labour. . . . If then while you were bearing labours and braving dangers I had led you, myself, your leader, without labours and without dangers, you would not unnaturally have become weary in your hearts; when you alone had all the labours, and were procuring the prizes thereof for others; but it is not so; our labours are shared in common; we bear an equal part in dangers; the prizes are open to all (Arrian {R} II:87).

When Alexander finished his speech to his commanders, there was a great silence for a long time for no one wanted to anger their king. It was Alexander's policy that all those who disagreed with him should speak out their own thoughts. So it was, after a second period of long silence, that Coenus got the courage and replied back to Alexander. His entire speech is found in Arrian's History of Alexander, Book V, Chapter XXVII and is a reflection on the high quality of leaders that Alexander surrounded himself with. Coenus' speech and main topic has been paraphrased below:

Seeing that you, sir, do not yourself desire to command the Macedonians tyrannically, but expressly state that you will lead them on only by gaining their approval, and failing this you will not compel them, I shall not speak these words on behalf of us here present, who, being held in honour beyond the rest . . . are in all things heartily ready beyond others to forward your interests; rather I shall speak for most of the army. And even on their behalf I shall not say merely what is pleasing to them, but what I consider useful to yourself for the moment and safest for the future. . . . For just because very many and very great achievements have been wrought by yourself our leader, and by those who set out from home with you, just for that reason I judge it the more expedient to set some limit to these labours and these dangers. . . . These, one and all, have longing for parents, if they yet survive, longing for wives and children, longing even for their homeland, which they may pardonably long to revisit. . . . But do not be a leader of unwilling troops. You will not find them like-minded towards dangers, when in their efforts no spirit of willingness will remain; rather do you yourself, if so it seems good, return to your own home, and revisit your own mother, and ordain the affairs of the Greeks, and bring back the guerdon of these many great victories to your ancestral house, and then, if so you desire, fit out another expedition, to attack these same Indian tribes that dwell towards the east. . . . It is for you to take the lead in this. There will follow you other Macedonians, other Greek, young in place of old, fresh in place of wearied; men to whom warfare will have no terrors for the moment, for want of experience of war. . . . A noble thing, O King, above all other, is the spirit of self-restraint when all goes well with us. For you indeed, as our leader, and as commander of such an army, there is no fear from any enemies (Arrian {R} II:94-95).

Most of the commanders were so moved by this speech that they broke out in applause while others openly wept. Alexander however, was disappointed with the response and angrily dismissed the meeting (Arrian {R} II:94-95). At a second meeting the next day Alexander informed his commanders that he was continuing with his expedition but that he would not force any Macedonian to accompany him against their will. As a parting shot, Alexander reminded his commanders that once they returned to Macedonia they must inform their fellow countrymen that they left Alexander surrounded by his enemies. Alexander then retired to his own tent, hoping that his soldiers would change their minds and continue the expedition they had started out together on. After the third day, Alexander realized that his men were still adamant about returning home, and were even more upset at him because of his anger. Alexander then informed them that they would all be returning home. This news caused great excitement in the camp, and the soldiers shouted out

their blessings to Alexander. Alexander suffered his first defeat, not at the hand of the enemy, but from his own soldiers.

After all preparations had been made, and proclaiming Porus King of all of India that he had conquered, Alexander's army traveled down the River Hydaspes. The army initially traveled in three columns: Craterus along the right bank with a brigade of infantry and a regiment of cavalry; Alexander on the river in boats with the hypaspists, archers, Agrianes, and the Companion Cavalry; and Hephaestion with the remaining and largest force. During the entire journey, Alexander would send one Companion or another with brigades to receive the surrender of many more Indian territories, and defeating those who resisted. The Mallian tribe, of all the Indian tribes encountered so far, proved to be the most resilient and the most dangerous. He defeated the Mallian cities one after another, pursuing them relentlessly through swamp and across deserts.

When he came at last upon their last fortified city to which many Mallians had previously fled to, Alexander established his army in a ring around the city to prevent any from escaping. During the assault the very next day, Alexander's impatience overrode his good judgment. Thinking that his soldiers were moving too slowly, Alexander seized a ladder and climbed to the top of the city wall first. In their haste to follow Alexander, the hypaspist agema over-loaded the ladders and broke them under their combined weight. This left Alexander on top of the wall alone. Instead of waiting for others to join him, Alexander leapt down into the city. This was probably as much for heroics as it was also for survival. Standing on the top of the wall, he made an excellent target for Indian archers. Three other men reached the top of the wall, and when they saw Alexander leap down, they also leapt down to protect him.

Taking a stand with their backs to the wall, the four men proceeded to defend themselves and inflict heavy casualties on the Indians. Alexander was struck down by an arrow in the chest, right over a lung, while one of the other four was also killed by an arrow to his face. Overcome by

fatigue and loss of blood, Alexander fainted, to be protected by the two remaining Macedonians. They were eventually saved as small groups of Macedonians began to reach the top of the wall and leap down into the fight around Alexander. Eventually the Macedonians broke through the Indian defenses to save Alexander and killed every man, woman, and child in the city.

After recuperating from his wound, Alexander traveled down the River Hydraotes, into the River Acesines, then finally into the River Indus, where it would eventually empty into the Persian Gulf. At the junction of the rivers Hydraotes and Indus, Alexander built another city called Alexandria, before continuing his journey south. Traveling towards the Indus delta, Alexander was able to conquer the last of the Indian tribes along the Indus. Some of the independent tribes surrendered voluntarily, others unfortunately, had to be convinced by battle. The names of some of the governors of the territories include: Abastanes; Xathrians; Ossadian; Musicanus; Oxycanus; Sambus; Brachmans; and Pattala. Finally in the land of Pattala did Alexander make his plans to travel home to Macedonia.

Alexander sent Craterus with the heavy infantry brigades of Attalus, Meleager, and Antigenes, the elephants, some of the archers, and those Companions and other Macedonians that were already past the military age back to Macedonia, traveling west through the territories of the Arachotians and Zarangians to reestablish his control over those rebellious tribes (Arrian {R} II:155). Alexander took with himself half of the hypaspists, archers, the remaining heavy infantry brigades, the Royal Companion cavalry, all of the mounted archers, and a squadron from each cavalry regiment through the territory of Gedrosia. They traveled along the seacoast in order to dig wells to resupply the fleet with water. Nearchus was made admiral of the fleet and also traveled along the seacoast with the remaining soldiers. All three columns were to meet later in the territory of Carmania.

turning movement. He had fully understood the tactic of attacking the enemy's flank, which he used so often before with favorable results, but never had he forced the enemy to shift his entire defensive position. Alexander's entire river crossing operation still remains today as the foundation for modern doctrine in conducting river crossings (Mixture 83).

A more tactical analysis reveals two additional changes that Alexander performed to overcome the enemy. He first crossed his cavalry, which was not the standard of the time. Usually he crossed a combination of infantry and skirmishers to secure a bridgehead for the cavalry, which he considered to be the most decisive combat arm and could not afford to lose. He crossed the cavalry first this one time because he concluded correctly that the real threat lay in Porus' cavalry and chariots arriving before his own army was established on the far shore. This was a reasonable assumption since Porus' camp was eighteen miles down river and the faster cavalry and chariots would arrive before the infantry. Therefore, the best force to counter the Indian cavalry was with other cavalry.

A second modification was the initial placing of all of his cavalry in the right wing to give Porus the impression of a weaker left wing. This would play into Alexander's plan exactly as he hoped. Alexander knew enough about Indian tactics, probably gained during his stay with King Taxiles, to realize that the Indian chariots and cavalry did not fight in the western prescribed way of war. He also knew that the highest nobles were mounted on the elephants, whereas, all of the lesser nobles were mounted in chariots or on horses. Indian chariots and cavalry mostly operated as individuals and had no boundaries on the battlefield. Alexander suspected that the chariots and cavalry that were not engaged would leave their position and cross the battlefield to engage other mounted nobility. He would then engage them in the rear with the two cavalry units he had stealthily moved to his own left flank. This action would help to screen his phalanx from the Indian archers as they crossed the battlefield to join in the fight.

CHAPTER 7

WARS OF THE DIADOCHI

Alexander's lieutenants divided up his kingdom, ostensibly for his heirs. But ambition and mutual jealousies soon broke up the empire, and brought on wars. Discipline declined. Corps and armies sold themselves for gold, or betrayed their generals. Courage ebbed with discipline, and Oriental devices were adopted to eke out valor. Still, the old officers trained by Alexander showed that they were good soldiers, and their campaigns and battles bear the stamp of their great master. Fortification especially grew apace, and received its highest exemplification at the siege of Rhodes. The stratagems employed by Eumenes in manoeuvring against Antigonus, and the third battle of Mantinaea, won by Philopoemen over the Spartans, are good samples of the work of the successors of Alexander. But Greece had degenerated, and with her Macedon; and finally the proud nation of Philip and Alexander, forgetful of the virtues which had made her great, sank under the sway of sturdy Rome (Dodge 663).

As Alexander's army traveled home towards Macedonia, there are no historical accounts of Craterus' travels until he links up with Alexander. Of Nearchus' route there is Book VIII of Indica written by Arrian, in which he mainly describes the geography and tells tales of wondrous sights as never seen before by the Greeks. As for Alexander, his route of march was very difficult travel through the desert of the Gadrosians. He was forced to march further inland and at night because of the lack of water and forage. "Most of the histories of Alexander affirm that not even all the trials that his army endured in Asia were worthy to be compared with the miseries they suffered here" (Arrian: {R} II 177). After finally reaching the Gadrosian capital, Alexander resupplied and rested his army before moving on towards Carmania. Here he was joined by Craterus and his forces and some scouts from Nearchus, who had put in along the inhabited shore.

Alexander next instructed Nearchus to continue his voyage through the Susia territory and to the river Tigris. Hephaestion was sent with most of the army, all of the elephants, and the baggage trains and was also directed towards Persia, traveling along the coast until he came upon the Tigris. Alexander took with himself the Companion cavalry, the light infantry, and part of the archers along the northern route, making his first stop at the first Persian city of Pasargadae.

During his return journey, Alexander made changes to the satraps if he heard of any corruption or rebellion on their part. Some were executed outright for their wrong doings while others were replaced with more loyal followers.

While in Susa, Alexander married Darius' oldest daughter, Barsine, and Parysatis, the youngest daughter of Ochus. He also arranged for eighty of his Companions to marry the daughters and wives of the Persian and Median nobles. At the same wedding, some ten thousand Macedonians were also wed to Persian women. There was one large wedding ceremony, performed in the Persian custom and wearing Persian attire. As part of the celebration, Alexander paid all the debts his soldiers had incurred during the expedition and each wedded couple received a dowry. As a tribute to Alexander, the Persians brought him thirty thousand Persian youths, dressed and trained as Macedonians, whom Alexander promptly called the "Successors". Alexander had previously left instructions with the satraps to begin building such a corps of new soldiers, in fact, he had already begun incorporating Persians into his army after Gaugamela on a smaller scale.

Alexander continued marching west and made camp with all of his forces near the city of Opis. Here Alexander dismissed all the wounded and elderly Macedonians from the army and sent them home to Macedonia. This final act caused the Macedonians to rebel once again. The soldiers were already feeling slighted by Alexander when he accepted the Successors. Then he gave Persian nobles command of some heavy infantry brigades and created a Persian hypaspist brigade, a Persian Companion cavalry and Royal Squadron, and formed Persian Infantry Companions. All of this was too much for the Macedonians, who felt that Alexander was replacing them with Persians and that Alexander himself was becoming more Persian than Macedonian. This caused Alexander to become very upset with his soldiers and he gave a second speech, very much like his first, and once again won the hearts of his soldiers.

Alexander's final city towards his journey home was the great city of Babylon. Here he made final preparations for the fleet and also for Craterus, whom he was sending overland to replace Antipater as regent of Macedonia. During a drinking festival with Medius, a trusted Companion and friend, Alexander became sick and died several days later. Some historians have tried to weave a plot around Alexander's death, but his royal diaries lead to no such suspicion. Alexander was thirty-two years old when he died. He had been king for twelve of those years, almost the entire time spent campaigning. During his historic expedition, Alexander's army marched twenty-two thousand miles, fighting almost the entire way without losing a single battle. They fought in mountains, deserts, cities, and swamps while being outnumbered in almost every engagement.

Since Alexander never named his successor, but he did hand his signet ring to Perdiccas while on his death bed, the responsibility of determining the rightful ruler fell upon the army, as was a traditional method in ancient times. The infantry favored Arrhidaeus, an epileptic child of Philip and Alexander's half-brother, while the cavalry selected the unborn son of Roxane. While in Babylon, a compromise was reached before the two parties came to armed conflict where the two minors would rule conjointly. Due to the children's inability to command, it was decided that the leading generals would be placed in charge of their respective satrapies. Ptolemy would govern Egypt, Lysimachus controlled Thrace, Antigonus ruled Asia Minor and Greater Phrygia, Seleucus was governor of Babylon, and Perdiccas was named as regent to Alexander's heirs and in control of Macedonia. At the same council, it was also decided that they would cancel Alexander's plans to infuse the Greeks with the Orientals and instead maintain the attitude of Macedonia as being the superior race.

While the news of Alexander's death did not initiate serious rebellions in Persia, an uprising in Greece abolished the Corinthian League, which was replaced by a Hellenic League with

Athens taking over the hegemony. This Lamian War was quickly put down by Antipater and destroyed Athens sea-power forever at the battle of Amorgos in 322 BC. While Antipater could not restore the old Corinthian League he was able to maintain peace with each of the rebellious city-states. Alexander's monarchy was soon abolished and with it came the decline of his empire. The young King Philip Arrhidaeus was murdered by Alexander's mother, Olympias. Cassander, son of Antipater, murdered Olympias and Roxanne, along with Roxanne's newborn son Alexander. This ended the family of Alexander.

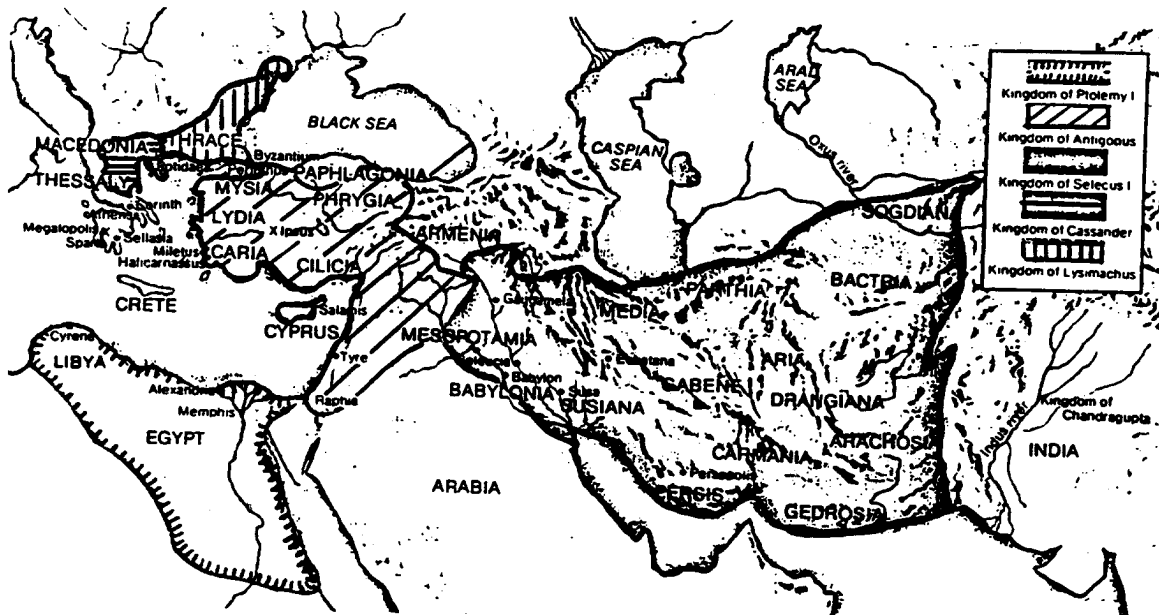


Fig. 16. Map of Successors territories. Reprinted from John Warry, Warfare in the Classical World (Oklahoma: University of Oklahoma Press, 1995), 86.

The following is a brief history of Alexander's successors with subsequent paragraphs detailing key battles during the Wars of the Diadochi from 321 to 281 B.C.E. Perdiccas was crushed first, killed in 321 B.C.E. by his own men as he tried to invade Egypt, some say he was murdered by assassins paid by Ptolemy. Antipater again became regent of Macedonia but he died in 319 B.C.E. and was replaced by his son, Cassander. Cassander, who had murdered Alexander's

mother, wife, and child, died in 298 B.C.E. Meanwhile Antigonus and his son Demetrius were active in Greece, taking Athens and most of the other cities from 307 to 303 B.C.E. After his victory at Salamis in 306 B.C.E., Antigonus attempted to proclaim himself absolute ruler of Alexander's empire but was blocked by the coalition forces of Ptolemy, Seleucus, Lysimachus, Cassander, and Eumenes.

In 301 B.C.E. Antigonus died during the crucial Battle of Ipsus against Seleucus, Lysimachus, and Cassander. This battle resulted in the reformation of Alexander's empire to only four kingdoms: Cassander ruled Macedonia; Ptolemy ruled Egypt; Seleucus ruled Persia; and Lysimachus ruled Thrace and Anatolia. Demetrius survived the battle and continued to win and lose Macedonia and other Greek territories until 285 B.C.E., when he was forced to surrender to Seleucus, dying in prison three years later. During this time, Seleucus attempted to regain the empire's eastern provinces in the Indus Valley, which had struggled free during the constant fighting between the successors. Ptolemy died in bed in 283 B.C.E. but founded the Ptolemaic line in Egypt before his death. Antigonus II, son of Cassander, son of Antigonus, begins the Antigonid rule of Macedonia in 281 B.C.E.. Lysimachus was killed in hand-to-hand fighting in 281 B.C.E. at the Battle of Corus by Seleucus. Seleucus, the last surviving successor, began the Seleucid dynasty which continued well after his murder by Ptolemy Keraunos, son of Ptolemy, in 280 B.C.E. (Brownstone 36-39). The ultimate result of the Wars of the Diadochi was three great monarchies: Egypt under the Ptolemies, Asia under the Seleucids, and Macedonia under the Antigonids (Wilcken 269). The following key battles briefly describe the chain-of-events leading to the ultimate demise of Alexander's empire under the reign of the Successors.

Antigonus', satrap of Asia Minor, devised a tactical plan at the Battle of Paraitacene in 317 B.C.E. based on Alexander's battles at the Granicus and Gaugamela. Antigonus made his battle line oblique by pushing forward his stronger right wing, but his left wing commander took it

upon himself to engage first, relying on his cavalry's superiority over Eumenes of Cardia's right wing. Antigonus was attempting a flank attack with his heavy cavalry and horse archers when his left wing collapsed due to his subordinates' rash charge. His infantry were also pushed back by Eumenes' infantry phalanx with the assistance of elephants. This created a wide gap in Eumenes' army which Antigonus quickly exploited, like Alexander, and attacked the enemy's exposed flank and routing the entire army (Hackett 127).

"The Battle of Gaza in 312 B.C.E. illustrates the tactical methods of Ptolemy I of Egypt against Demetrius, son of Antigonus, a second-generation imitator of Alexander" (Hackett 128). Ptolemy used a series of elephant-traps or minefields covered by archers and javelin-men to prevent Demetrius' infantry phalanx and war-elephants from advancing in the center, while his own right flank overwhelmed the enemy's left flank. This led to the eventual rout of Demetrius' infantry and remaining cavalry.

The Battle of Ipsus occurred in 301 B.C.E. after Antigonus declared himself king of Macedonia and entered Asia Minor with thirty thousand soldiers in an attempt to reunite Alexander's empire (Kohn 218). He was opposed by the forces of Cassander, Seleucus and Lysimachus and was killed along with twenty two thousand of his men. Cassander was recognized as king of Macedonia but died shortly afterward in 300 B.C.E. The decisive arm during this battle, and many others, was the excellent use of the war elephants.

The Battle of Corupedion in 281 B.C.E. officially ended the Wars of the Diadochi, although the descendants of Alexander's lieutenants would continue fighting until all of Greece was conquered by Rome. It was fought in Asia Minor, between Lysimachus with his Macedonian soldiers and Seleucus with his Syrian troops. Before the battle began, the two elderly generals who would be king engaged in hand-to-hand combat. Seleucus killed Lysimachus and the Syrian army routed the Macedonians (Kohn 119).

King Pyrrhus of Epirus, a state in north Greece, was a first cousin of Alexander and also a student of his in the art of war. When the Greek cities in southern Italy asked for help in fighting off the Roman barbarians, King Pyrrhus went to their support. Pyrrhus had plans to the west for the same kind of campaign that Alexander had conducted to the east. Alexander himself was preparing plans to move west and conquer Carthage and return to Greece by route of Spain and Italy until his untimely death. Pyrrhus used the various cavalry and infantry forces in the same manner as Alexander had, with the addition of twenty war elephants as well. Pyrrhus campaigned for two years in Sicily, defeating the Romans in every battle and inflicting severe losses on them. However great the victories were, the Romans kept replacing their losses with new recruits while Pyrrhus was slowly depleting his skilled leaders and soldiers. After one such battle, "Pyrrhus was heard to comment, if we are victorious in one more battle against the Romans, we shall be utterly ruined" (Regan 22). From this battle and others like it we gain the enduring phrase 'Pyrrhic victory'.

In 275 B.C.E. Pyrrhus fought his last battle against the Romans at Beneventum. The battle was first in favor towards the Romans until Pyrrhus led his Thessalian cavalry in an Alexander like charge. He was successful in driving off the main Roman army but their reserves began attacking the Greek army, specifically the elephants, with arrows, heated missiles, and fire. This set the elephants to stampede into Pyrrhus' army and disrupt its cohesion. The Roman army was then finally able to bring their short swords into deadly use against the phalanx. Pyrrhus's army was thoroughly defeated and he returned to Greece with a warning to his countrymen that they had better stop the Romans now before they destroyed Greece. Unfortunately, his warning went unheeded by the rest of Greece. In the end, it was a lack of manpower, rather than inferiority in military technique, which ultimately sealed Macedonia's fate. The amount of available

manpower was nearly halved by 197 B.C.E. and these numbers were inadequate to deal with Rome's ability to conscript horde after uncomplaining horde of Italian peasant manpower.

The sub-empires originally reflected Alexander's way of war but after more than forty years of uninterrupted fighting and the deaths of his immediate successors they rapidly declined into Asiatic armies of mercenaries. Loyalty and discipline disappeared from the army and were replaced by vast swarms of recruits seeking fortune from whomever made the highest offer. After the Battle of Ipsus, the Greeks patriotism and ability to conduct war was lost, only to reemerge for a short duration under King Pyrrhus.

Even though the basic soldier skills that the Greek army was famous for were lost, the art of war as developed or refined by Alexander survived at least with the first and second generation successors. The order of battle, march formations and tactical maneuvers continued to be used by Alexander's lieutenants, in fact, they even made some additions. They increased the size of heavy infantry and light infantry, broadened the use of light cavalry and light infantry, used missile-throwers more often on the battlefield instead of only at river crossings, sieges, or narrow passes. The successors also incorporated the elephant into their armies as a major combat arm, something that Alexander abhorred, and proved to be highly successful until later Romans developed a counter-strategy.

I believe a major cause leading to the decline of the Diadochi was their slow but continuous regression back to a single arms concept in battle. Ancient armies had first started out as single combat between two antagonists, slowly progressing into two massed armies pushing against each other head-on, then using the concept of envelopment to strike at the flank of an enemy, evolving until finally, Alexander introduced the tactics of combined arms operations. Since ancient armies were often recruited by the promise of land, it became necessary to provide cavalry settlers with larger estates than those of infantry, therefore, cavalry settlements were more

expensive to maintain and less desirable by the successors. Less cavalry also meant less cavalry training and changes in tactics.

This led to a greater reliance on heavy infantry and fewer cavalry, and therefore created a less mobile army. "To offset the weakened maneuverability, the heavy phalanx was divided into ten blocks of 50 wide by 32 deep as described in the Battle of Magnesia in 190 B.C.E. by Antiochus the Great. It is unfortunate that the date when Rome adopted the maniples is unknown, for the two developments seem to be related" (Hackett 132).

CHAPTER 8

CONCLUSION

It must be borne in mind that my design is not to write histories, but lives. And the most glorious exploits do not always furnish us with the clearest discoveries of virtue or vice in men; sometimes a matter of less moment, an expression or a jest, informs us better of their characters and inclinations, than the most famous sieges, the greatest armaments, or the bloodiest battles whatsoever. Therefore, as portrait-painters are more exact in the lines and features of the face, in which the character is seen, than in the other parts of the body, so I must be allowed to give my more particular attention to the marks and indications of the souls of men, and while I endeavor by these to portray their lives, may be free to leave more weighty matters and great battles to be treated of by others (Plutarch 540).

As Plutarch's design was to write about the life of Alexander and not a historical account of his conquests, so too is my design to write only about combined arms warfare during the reign of Alexander the Great. I have chronicled the historical events only as a method to analyze his application of combined arms in the art of war through various stages of his career. At no time was it my intention to lead the reader into believing that Alexander defeated his numerous enemy's solely with the use of combined arms. Only with astute employment of all of the principles of war was Alexander capable of accomplishing all that he did, and his list of accomplishments is indeed astonishing.

In the preceding pages, I have recorded Alexander's use of combined arms warfare through a sequential analysis of his most famous campaigns and battles, from his first significant action as seen at the battle of Chaeronea, until his final great battle in India at the Hydaspes River. There are numerous smaller battles and skirmishes that I have intentionally left out of this short study for no better reason than the lack of time. I do not know whether Alexander invented combined arms warfare or not, he may have learned it from his father, Philip II of Macedon, who in turn may have been taught it by Epaminondas the Theban during his years in captivity. That is another good question for future research, however, due to the shortage of written historical

transcripts we may never know the answer to that question. What is for certain, however, is that Alexander did use combined arms warfare, in conjunction with other principles of war, to defeat every enemy that he encountered. Not only did he use combined arms, but he continuously improved its application by refining its employment as the situation changed.

Early on in this study we saw the vastly improved Macedonian army that was left to Alexander by his father, very much like Frederick the Great received the army from his own father. Philip had made it his priority to heighten the influence of Macedonia with their Greek neighbors before his own untimely death in 336 B.C.E. Philip used his time and directed his efforts towards building a model army, then used that army to consolidate Macedonia from the various nobles. Once the kingdom of Macedonia was secure in his hands, only then did he direct his army against the barbarian neighbors to the north, and later still, to the unification of Greece to his south. With the end of the Fourth Sacred War in 338 B.C.E., Philip formed the Hellenic League of alliance between Greece and Macedonia for the purpose of freeing Greek cities in Asia Minor from Persian rule. He was named commanding general of the combined Greek-Macedonia army and began preparations for invading the Persian empire. It was this army that provided Alexander the opportunity to accomplish what he did. But we see that he did not sit idle either, he made his own improvements to the organization and equipping of that army.

One of his earliest and elementary use of combined arms warfare was during the campaign against the Triballians, a northern Thracian tribe that was rebelling, who had to be suppressed before he began his campaign into Persia. During this battle, Alexander transferred some forces that were traditionally formed on the right wing and placed them on the left wing, placing himself in the left wing also. Ancient western armies always placed the best soldiers on the right wing, which is the place of honor, and the leader was also positioned near the right wing and in command of the fighting elite, in Alexander's period this was the Companion Cavalry. When Alexander

switched positions of his hypaspists, Cretan archers, and Agrianian slingers to the left he was in fact beginning the first step towards integrating combined arms tactics into his army. Instead of relying solely on the right wing heavy cavalry to defeat the enemy, he was now willing to decisively engage the enemy along the entire front line and to have a tactically decisive arm in the left wing that was capable of defeating the enemy.

During this same engagement, Alexander also placed greater emphasis on the skirmishers by directing them to close with the enemy and remain engaged. Typically, skirmishers would release their missiles and then retreat to the flanks or rear of the phalanx to await follow-on missions. Against the Triballians however, the skirmishers did not retreat and instead fought the enemy, thereby giving the cavalry the time they required to charge the enemy. Additionally, Alexander had placed his heavy infantry and hypaspists into columns instead of on line which gave the infantry the mobility they required to also close with the enemy before they could disengage from the fight and escape into the woods. By deploying his troops as he did and disregarding traditional doctrine, Alexander was able to combine various arms into one tactical engagement and decisively destroy the enemy.

Another example of Alexander employing combined arms operations also occurred while he was consolidating Greece. During the interval of fighting the Illyrians and Taulantians, Alexander became caught in a very untenable situation near the city of Pelium. In addition to using deception and dismounting the light cavalry to fight as infantry, Alexander employed his siege equipment and skirmishers as field artillery to provide cover fire for his infantry as they conducted a river crossing. He successfully extracted his army and eventually shattered the Illyrian and Taulantian army during a surprise night attack.

In his first battle against the Persians in 334 B.C.E. at the Granicus River, Alexander for the most part deployed his army in what would become his traditional Greek formation. The heavy

infantry were near the center of his line and the hypaspists to their immediate right. The left flank was protected by the Thessalian heavy cavalry and other lighter cavalry squadrons while the light infantry were positioned in the rear of the formation. However, by making two slight modifications he was able to quickly change the standard formation into a combined arms maneuver. First, Alexander combined one squadron of heavy Companion Cavalry with a squadron of Paeonian light cavalry and one brigade of hypaspists to form the main assault force. The mixing of distinctly separate units into a task force was not the standard practice before Alexander's reign. The second modification Alexander made was to disperse his skirmishers amongst the heavy Companion Cavalry, thereby providing protection for the lightly armored skirmishers and also increasing the fire power from his cavalry against the Persian cavalry.

At the Battle of Issus in 333 B.C.E., Alexander began the battle with his traditional oblique movement to his right, leaving all the various arms in their standard order of battle. The Companion Cavalry made the first contact and quickly over-ran their opponents, those Persians being unable to withstand the massive shock assault from the heavy cavalry. Here is where Alexander's tactical ability shines far above his contemporaries. Instead of allowing his cavalry to pursue the fleeing enemy, as most victors did to pillage loot from the baggage trains, Alexander wheeled his forces to the left and into the flank of the Persian's center phalanx.

The Persian's center phalanx was already engaged with the majority of Alexander's heavy infantry and were succeeding in holding back the Macedonians. That is, they were until Alexander struck them in the flank with his heavy Companion Cavalry, the hypaspists, and two battalions of heavy infantry. The light cavalry, light infantry, and the skirmishers were positioned to secure his own right flank while he led the charge against Darius. This combined force of various arms on two sides was too much for Darius, who quickly fled and was immediately followed by the rest of his army.

Two minor battles, first at Tyre and later at Gaza, were small but complex sieges that greatly demonstrated Alexander's development of combined arms. During the sieges of Tyre and Gaza, Alexander made extensive uses of his naval forces, siege equipment, and engineers working in direct coordination with all of his various infantry arms. The cavalry were correctly determined to be of little use during the sieges and were sent out on numerous scouting and foraging missions during this time. The naval forces performed the usual fighting of enemy ships within the harbor, but more importantly, served as off-shore platforms for the skirmishers with their missiles and for the siege equipment. Some of the triremes also carried the hypaspists on board as assault landing forces. The engineers worked at building moles, elevated platforms, and under-mining the city walls in direct observation of the enemy, all the while covered by fire from Alexander's skirmishers and siege equipment. All the while, the infantry forces were assisting the engineers in their construction efforts up until the time arrived for the assault. Then all of the combined arms made a coordinated attack at various locations around the city and easily forced their way into the cities.

During his final confrontation with Darius at the Battle of Gaugamela in 331 B.C.E., Alexander was vastly outnumbered and his lines were greatly overlapped by the enormous Persian army. This battle presents a variety of revisions that Alexander introduced and continued the evolution of combined arms operations. First, both wings were turned back to an angle of forty five degrees to help prevent encirclement. Second, Alexander reinforced his wings to act as a flying reserve column that could reinforce gaps in his lines or conduct a counter-attack against the enemy flanks. Third, the peltasts were arrayed behind the phalanx to act as another tactical reserve force with orders to turn about if the enemy attacked from behind and to reinforce gaps in his lines. And finally, the skirmishers were reorganized into cohesive units instead of fighting independently in open order. These simple alterations provided Alexander better control over his various combat arms and allowed him greater flexibility in coordinating their attacks as a

combined force. This placement of his reserve peltasts and skirmishers were able to defeat the Persian chariots when they worked in coordination with both the heavy infantry and the cavalry.

Additionally, Alexander's tactical decisiveness provided another step towards combined arms warfare. During the course of the battle, as the Persian cavalry moved to their left to counter Alexander's oblique movement, they inadvertently created a gap between themselves and the first line infantry units. Alexander immediately recognized this opportunity and formed his hypaspists, Companions, and two taxis of infantry into a combined arms wedge and charged toward the gap. As it happened, Darius also happened to be near the gap and at the center of Alexander's attack and as in previous battles, lost his nerve after a brief fight and fled the battlefield. The Persian center also began withdrawing when they saw their King retreating and could not stand up to the onslaught of the Macedonian sarissa. Although far from being finished, this was the turning point of the battle.

After the battle and in the course of the chase for Darius, Alexander introduced a new combat arm to his already growing combined arms team. Recognizing the need for both speed and combat power, Alexander mounted five hundred of his heavy infantry and hypaspists to accompany him along with the heavy and light cavalry. He was so impressed by their capability that he continued mounting more infantry until he had several battalions of mounted infantry at his disposal. This combat arm could be exploited quickly across the battlefield and when dismounted, pose a formidable threat to any enemy force.

In two separate operations against the Scythians, Alexander successfully used his skirmishers and siege equipment to assault fortified cities and to conduct an opposed river crossing. In assaulting the fortified cities, the skirmishers and siege equipment were able to lay down sufficient covering fire for the various infantry forces to use scaling ladders, built by the engineers, and climb the walls while receiving no missile counter-fire from the enemy. In the successive

operation against the Scythians at the Jaxartes River, Alexander first placed his siege equipment along the friendly side shore and was able to drive the enemy back with several well placed volleys. He next moved his skirmishers across the river, since they had a much shorter effective range than the siege equipment, to provide additional fire support while the infantry crossed the river. In both instances, Alexander was able to close with the enemy without suffering any casualties and bring the entire weight of his infantry to bear against the enemy infantry.

Even though Alexander continued to use combined arms operations during the Asiatic campaigns, perhaps his greatest contribution during this time was dividing his army into several combatant columns, each being self-sufficient and comprised of a variety of the different combat arms. His primary reasons for doing this were because of the rough terrain, lack of forage, guerrilla warfare, and the widely separated enemy. Whether out of foresight or necessity, Alexander's new strategic organization of separate columns expedited the evolution of the art of war, and specifically, the art of combined arms operations. While this is not unusual for modern militarists who are familiar with the division and corps concept of independence or self-reliance, this did not occur during the ancient period when all soldiers were under the direct control of the king or commanding general. One obvious result was his reliance on subordinate commanders to conduct their own operational campaigns with all available forces and the necessity for Alexander to develop a strategic plan that coordinated the maneuvers of all of the columns. In essence, this brought the control of a combined arms team from the army level down to a corps, division or even a brigade level.

After defeating the Scythians and before he arrived at the Indus River, Alexander encountered three separate tribes of the Sogdianians, Pareitacae, and the Guraeans. These tribes had fortified mountain strongholds such as: Rock of Sogdiana, Rock of Chorienes, and Mount Aornos, out of which they expected to defeat Alexander from. During the assault of these

mountain strongholds, Alexander relied more on deception, engineering feats, and sheer tenacity than any real combined arms operation. It was ultimately the sheer combat power of the heavy infantry that Alexander was able to drive the enemy from their strongholds or to sue for peace.

During his final campaign against the Indians and his last great battle at the Hydaspes River, Alexander relied more on deception and stratagems as a combat multiplier and a successful turning movement than on combined arms tactics. This is not to say that Alexander disregarded his combined arms tactics learned to date. He did in fact, employ his skirmishers in conjunction with the heavy infantry as a method to defeat the Indian elephants during their first encounter. It would take the Romans several defeats in battle before they would learn to use the same tactic. The initial battle pitted cavalry against cavalry and the Macedonian phalanx against the Indian war elephants. Not until the elephants were defeated, were the infantry able to combine forces with their cavalry and defeat the Indian infantry.

A brief study of the Diadochi reveals that Alexander's immediate successors did use combined arms during their battles against each other. Most of them also included the war elephant, with varied success, as a new combat arm. Upon the retirement or deaths of the successors however, Alexander's art of war was soon lost, most specifically his use of combined arms warfare. There are several causes leading to the disuse of combined arms operations, most notably, the decline and corruption of the professional army, a lack of written doctrine or training program on Alexander's part, and a general conformity to only one type of weapon or combat arm. This greater reliance on a singular combat arm remained a problem for subsequent armies until the eighteenth century, at which time various leaders experimented with the application of combined arms operations. Even then, the United States Army continued to experience difficulty with the synchronization of combined arms operations until a written doctrine was established in the mid-

psychological ability to penetrate the enemy's intentions-all these qualities place him at the very head of the Great Captains of history" (Green 487).

With a persona of this magnitude this thesis can not be relegated solely to the study of combined arms, for one can not help but to reflect on the qualities of the man also. One method of looking at the greatness of a man is to turn to his enemy for observations. "At this, Darius stretched his hands to the heavens and prayed thus: O Zeus the King, to whom it has been given to order the affairs of Kings among men, do thou guard safe for me, if so it may be, the sovereignty of Persians and Medes, as thou didst give it me; but if I be no longer King of Asia, do thou give my power to none but to Alexander. So much does he care for honourable conduct even towards enemies" (Arrian {R} I: 405). One should also look at what your contemporaries have to say for an honest opinion of your accomplishments. It has been said that Caesar wept at not having accomplished a fraction of Alexander's achievements by the same age and Napoleon thought the study of his life the supreme military education (Keegan Mask 88).

There has been much debate and discussion between historians as to the authenticity of the high number of soldiers used in both Alexander's and his enemy's order of battle. One reason to reject the unusually high numbers is based on the ability of the ancient armies to feed that many soldiers. Whatever the answer, Alexander was more than just a great battle captain, he was also a master logistician. To make his army more mobile, Alexander did not allow ox-drawn carts to carry supplies. Each unit was allowed a certain number of pack animals but primarily to be able to carry heavy loads themselves, as much as one months supply of flour. Alexander ruthlessly burned wagons that his subordinates attached to his army, beginning by burning his own wagon first (Keegan Mask 39).

Yet, because he tried to stay in rich, fertile valleys like the Euphrates, Indus, and Tigris where the food supply was more plentiful, his army rarely went hungry. He also used the Persian

road network system, which was probably one of the best in the world, to transport his replacements and logistics. Darius had built a military road between all major cities and stationed outposts filled with supplies every fifteen to twenty miles to keep his army informed, secure, and well provisioned. Alexander synchronized his campaigns with harvest dates in that region when allowable. When it wasn't convenient, he would split his army into separate column to make foraging easier. Another of his strategies was to stay near a river or port when in camp, making the transport of supplies easier and quicker.

Alexander usually sent out an exhaustive retinue of scout and spies to determine his enemy's strengths and weaknesses. They also provided intelligence as to the terrain and forage available for his army. When he could, he would attempt to make peace with the natives in the region and arrange for food supplies to be purchased and already waiting on his arrival. When the natives were not so supportive, Alexander came and took what he required any way.

Another one of Alexander's strengths that demands elaboration is his ability to lead soldiers in the most difficult situations, and to get them to follow him willingly. He basically accomplished this by treating his men with respect and enduring the same risks and hardships as they did. He was struck by every weapon available to the enemy; sword, lance, dart, arrow, catapult missile, and stones from slingers. His entire body carried scars from numerous battles, two of the more serious wounds were a leg bone that was broken by an arrow and another arrow that lodged in his lung.

Alexander went around to all of his wounded to talk to them and let them tell their tales of bravery, even while he was wounded. He held festivals for his men at the end of a tiring campaign, often giving them extensive monetary gifts because he did not allow plundering. After Granicus he gave a block of compassionate leave to all his newlyweds and he remitted the taxes of his dead soldiers' parents and children. After all of his battles, Alexander raised monuments to the dead

forever proclaiming their glorious deeds. His final act of generosity included a cancellation of all of his soldiers debts after the Indian campaign.

Alexander displayed that he was as politically astute as he was militarily smart. He left local elders or chiefs in charge of captured towns but he always left his own military commander and garrison to keep an eye out for his best interests. In Lydia he introduced a new concept, that of the office of taxation and finance not being subordinate to the satrap. This took away the satrap's potential for graft and corruption by the distribution of power. His marriage into noble families and the mass marriage in Susa in 324 helped to combine the two nations of Macedonia and Persia. Even though he became the great ruler, he still abided by his nation's laws, particularly that the army assembly vote on right and wrong. He also did not generally interfere with the local native laws or customs and he never interfered with anyone's religion.

Wherever Alexander traveled, he also tried to improve the economics of the territory. He built new cities where he thought a trade route would flourish, establishing over seventy new cities, several with his name. He connected the west with the east by introducing Greek art, poetry, and philosophy to all nations. During his campaign, Alexander had brought with him all the various scientists to study plant and animal life and establish libraries. He enhanced the canal system in Babylonia to encourage trade and improve living conditions in that city.

Alexander has clearly established that he is one of history's greatest military captains. No amount of opposition or adversity was too great that he could not overcome. By using all of the principles available within the art of war, and by developing some that did not exist, Alexander was able to win every battle he fought during twelve years of campaigning. Additionally, he has demonstrated the ability to implement diplomatic and economic instruments of power in coordination with military force to achieve his objectives. "In his short career Alexander completely changed the face of war. More than any of his predecessors he demonstrated the

fundamental tactical principles of concentration of force, co-operation between different arms, and a sustained logistics by living off the land” (Hackett 128).

BIBLIOGRAPHY

Academic

Starnaman, Craig D. "Alexander, Porus, and the Battle of the Hydaspes." Thesis Michigan State University, 1990.

Books

Adcock, F. E. The Greek and Macedonian Art of War. Berkeley: University of California Press, 1957.

Arrian. History of Alexander and Indica. 2 vols. Trans. E. Iliff Robson. 1929. Cambridge: Harvard University Press, 1967.

Arrian. The Campaigns of Alexander. Trans. Aubrey De Selincourt. 1958. New York: Dorset Press, 1986.

Borza, Eugene N. The Impact of Alexander the Great. Hinsdale: The Dryden Press, 1974.

Bosworth, A. B. Conquest and Empire: The Reign of Alexander the Great. New York: Cambridge University Press, 1993.

Briant, Pierre. Alexander the Great: Man of Action, Man of Spirit. Trans. Jeremy Leggatt. 1987. Trieste, Italy: Editoriale Libreria, 1996.

Brownstone, David, and Irene Franck. Timelines of War: A Chronology of Warfare From 100,000 B.C. to the Present. Canada: Little, Brown & Company, 1994.

Cassin-Scott, Jack. The Greek and Persian Wars: 500-323 BC. London: Reed Consumer Books Ltd., 1995.

Creasy, Edward S. Fifteen Decisive Battles of the World: From Marathon to Waterloo. 1851. New York: De Capo Press, 1994.

Cummings, Lewis V. Alexander the Great. Cambridge: The Riverside Press, 1940.

Dawson, Doyne. The Origins of Western Warfare: Militarism and Morality in the Ancient World. Boulder: Westview Press, 1996.

Delbruck, Hans. Warfare in Antiquity. Trans. Walter J. Renfro, Jr. 1975. Lincoln: University of Nebraska Press, 1990.

Devine, Albert. "Alexander the Great." Warfare in the Ancient World. Ed. General Sir John Hackett. New York: Facts on File, 1989.

Dodge, Theodore A. Alexander. 1890. London: Greenhill Books, 1994.

- DuPuy, R. Ernest, and Trevor N. DuPuy. The Encyclopedia of Military History: From 3500 B.C. to the Present. New York: Harper & Row, 1986.
- Engels, Donald W. Alexander the Great and the Logistics of the Macedonian Army. Berkeley: University of California Press, 1980.
- Fuller, J.F.C. The Generalship of Alexander the Great. New Brunswick: Rutgers University Press, 1960.
- Green, Peter. Alexander of Macedon: A Historical Biography. Berkeley: University of California Press, 1991.
- Green, Robert. Alexander the Great. New York: Grolier Publishing, 1996.
- Hackett, General Sir John. Warfare in the Ancient World. New York: Facts on File, Inc., 1989.
- Hanson, Victor Davis. The Western Way of War: Infantry Battle in Classical Greece. New York: Oxford University Press, 1990.
- Hart, B. H. Liddell. Strategy. New York: Praeger Publishers, Inc., 1974.
- Hatzopoulos, Miltiades B., and Louisa D. Loukopoulos. Philip of Macedon. Athens, Greece: Ekdotike Athenon S.A., 1980.
- Herbert, Paul H. "Deciding What Has to Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations." Leavenworth Papers 16. Fort Leavenworth: Combat Studies Institute, U.S. Army Command and General Staff College, 1988.
- Keegan, John. A History of Warfare. New York: Alfred A. Knopf, 1993.
- Keegan, John. The Mask of Command. New York: Penguin Books, 1987.
- Kohn, George C. Dictionary of Wars. New York: Facts on File, 1986.
- Kramer, Melinda G., Glenn Leggett, and C. David Mead. Prentice Hall Handbook for Writers. Upper Saddle River: Prentice Hall, 1995.
- Livesey, Anthony. Battles of the Great Commanders. London: Tiger Books International, 1990.
- Levi, Peter. Atlas of the Greek World. Ed. Graham Speake. New York: Facts on File, 1980.
- Mahaffy, John P. The Story of Alexander's Empire. New York: G. P. Putnam's Sons, 1897.
- May, Elmer C., and Gerald P. Stadler and John F. Votaw. Ancient and Medieval Warfare. Ed. Thomas E. Griess. Wayne: Avery Publishing Group Inc., 1984.

- Plutarch. The Lives of Noble Grecians and Romans. Trans. Dryden. 1952. Chicago: Encyclopedia Britannica, Inc., 1984.
- Regan, Geoffrey. The Guinness Book of Decisive Battles: Fifty Battles That Changed the World From Salamis to the Gulf War. Great Britain: Guinness Publishing Ltd., 1992.
- Rice, E. E. Alexander the Great. Thrupp, Eng.: Sutton Publishing Limited, 1997.
- Rufus, Quintus Curtius. The History of Alexander. Trans. John Yardley. London: Penguin Books Ltd., 1984.
- Sekunda, Nick. The Army of Alexander the Great. London: Osprey Publishing Ltd., 1984.
- Tarn, W. W. Alexander the Great. Chicago: Ares Publishers Inc., 1948.
- Thucydides. History of the Peloponnesian War. Trans. Rex Warner. 1954. London: Penguin Books Ltd, 1972.
- Warry, John. Alexander 334-323BC-Conquest of the Persian Empire. Ed. David G. Chandler. London: Osprey Publishing Ltd, 1991.
- Warry, John. Warfare in the Classical World. Ed. Philip de Ste. Croix. Oklahoma: University of Oklahoma Press, 1995.
- Wilken, Ulrich. Alexander the Great. Trans. G.C. Richards. 1967. New York: W. W. Norton & Company, 1997.

Periodicals

- Arneson, Dave. "Tactical Combat 1200 BC-1500 AD." Strategy & Tactics. Sep. 1990: 10.
- Maihafer, Harry J. "Upset at Issus." Military History. Feb. 1995: 63-69.
- Mixture, John R. "Alexander's First Great Victory." Military History. Dec. 1997: 50-56.
- Mixture, John R. "Alexander's Hydaspes Campaign." Command: Military History, Strategy & Analysis. Sep. 1996: 78-83.
- Stuart, Rick D. "A Tactica Guide to the Hellenistic Age." The Courier. Vol. IX, NO. 6: 15-22.
- Wirth, Peter. "Alexander's World Conquest." Military History. Feb. 1990: 10-18.

INITIAL DISTRIBUTION LIST

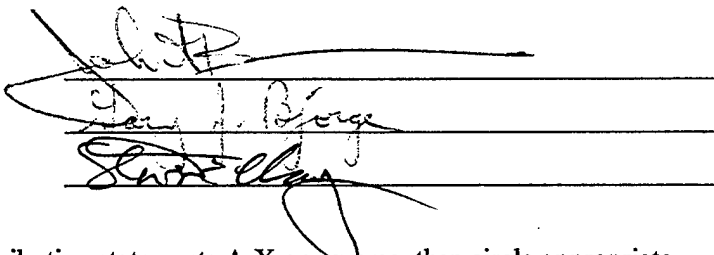
1. Combined Arms Research Library
U.S. Army Command and General Staff College
250 Gibbon Ave.
Fort Leavenworth, KS 66027-2314
2. Defense Technical Information Center/OCA
8725 John J. Kingman Rd., Suite 944
Fort Belvoir, VA 22060-6218
3. SFC John T. Broom
Combat Studies Institute
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352
4. Dr. Gary J. Bjorge
Combat Studies Institute
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352
5. LTC Steven E. Clay
Combat Studies Institute
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352

CERTIFICATION FOR MMAS DISTRIBUTION STATEMENT

1. Certification Date: 5 June 1998
2. Thesis Author: MAJ Robert B. Pederson
3. Thesis Title: A Study of Combined Arms Warfare by Alexander the Great

4. Thesis Committee Members

Signatures:



5. Distribution Statement: See distribution statements A-X on reverse, then circle appropriate distribution statement letter code below:

A B C D E F X

SEE EXPLANATION OF CODES ON REVERSE

If your thesis does not fit into any of the above categories or is classified, you must coordinate with the classified, you must coordinate with the classified section at CARL.

6. Justification: Justification is required for any distribution other than described in Distribution Statement A. All or part of a thesis may justify distribution limitation. See limitation justification statements 1-10 on reverse, then list, below, the statement(s) that applies (apply) to your thesis and corresponding chapters/sections and pages. Follow sample format shown below:

-----SAMPLE-----SAMPLE-----SAMPLE-----SAMPLE-----			
<u>S</u>			<u>S</u>
<u>A</u>	<u>Limitation Justification Statement</u>	<u>/ Chapter/Section</u>	<u>/ Page(s)</u>
<u>M</u>			<u>M</u>
<u>P</u>	<u>Direct Military Support (10)</u>	<u>/ Chapter 3</u>	<u>/ 12</u>
<u>L</u>	<u>Critical Technology (3)</u>	<u>/ Section 4</u>	<u>/ 31</u>
<u>E</u>	<u>Administrative Operational Use (7)</u>	<u>/ Chapter 2</u>	<u>/ 13-32</u>
-----SAMPLE-----SAMPLE-----SAMPLE-----SAMPLE-----			

Fill in limitation justification for your thesis below:

<u>Limitation Justification Statement</u>	<u>/</u>	<u>Chapter/Section</u>	<u>/</u>	<u>Page(s)</u>
_____	/	_____	/	_____
_____	/	_____	/	_____
_____	/	_____	/	_____
_____	/	_____	/	_____
_____	/	_____	/	_____

7. MMAS Thesis Author's Signature: _____

STATEMENT A: Approved for public release; distribution is unlimited. (Documents with this statement may be made available or sold to the general public and foreign nationals).

STATEMENT B: Distribution authorized to U.S. Government agencies only (insert reason and date ON REVERSE OF THIS FORM). Currently used reasons for imposing this statement include the following:

1. Foreign Government Information. Protection of foreign information.
2. Proprietary Information. Protection of proprietary information not owned by the U.S. Government.
3. Critical Technology. Protection and control of critical technology including technical data with potential military application.
4. Test and Evaluation. Protection of test and evaluation of commercial production or military hardware.
5. Contractor Performance Evaluation. Protection of information involving contractor performance evaluation.
6. Premature Dissemination. Protection of information involving systems or hardware from premature dissemination.
7. Administrative/Operational Use. Protection of information restricted to official use or for administrative or operational purposes.
8. Software Documentation. Protection of software documentation - release only in accordance with the provisions of DoD Instruction 7930.2.
9. Specific Authority. Protection of information required by a specific authority.
10. Direct Military Support. To protect export-controlled technical data of such military significance that release for purposes other than direct support of DoD-approved activities may jeopardize a U.S. military advantage.

STATEMENT C: Distribution authorized to U.S. Government agencies and their contractors: (REASON AND DATE). Currently most used reasons are 1, 3, 7, 8, and 9 above.

STATEMENT D: Distribution authorized to DoD and U.S. DoD contractors only; (REASON AND DATE). Currently most reasons are 1, 3, 7, 8, and 9 above.

STATEMENT E: Distribution authorized to DoD only; (REASON AND DATE). Currently most used reasons are 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

STATEMENT F: Further dissemination only as directed by (controlling DoD office and date), or higher DoD authority. Used when the DoD originator determines that information is subject to special dissemination limitation specified by paragraph 4-505, DoD 5200.1-R.

STATEMENT X: Distribution authorized to U.S. Government agencies and private individuals of enterprises eligible to obtain export-controlled technical data in accordance with DoD Directive 5230.25; (date). Controlling DoD office is (insert).